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Perceived parental over-protection in non clinical young adults is associated with affective vulnerability: A cross-sectional study

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43 **Abstract**

44 **Objective.** High levels of perceived parental over-protection are hypothesized to be related to
45 relational problems, psychological distress, and development of psychiatric symptoms. Here, the
46 main aim was to extend previous findings investigating the unique contribution of parental over-
47 protection in predicting affective vulnerability. **Method.** 296 students were recruited and tested
48 individually. All participants were administered self-report measures assessing parental styles [i.e.,
49 The Measure of Parental Style (MOPS)], several clinical dimensions (i.e., depressive symptoms,
50 trait anxiety and alexithymia), and a checklist assessing socio-demographic variables. **Results.**
51 Affective vulnerability was investigated combining anxiety, depression and alexithymia through
52 principal axis factoring which accounted for 70.90% of the variance of the data. All MOPS subscale
53 were positively associated with all clinical dimensions ($r > 0.13$; $p < 0.05$) and with the Affective
54 Vulnerability factor ($r > 0.25$; $p < 0.001$). Among different forms of dysfunctional parenting, only
55 maternal ($\beta = 0.19$; $p = 0.007$) and paternal ($\beta = 0.18$; $p = 0.010$) over-protection were independently
56 associated with Affective Vulnerability in the linear regression analysis, even when controlling for
57 sex, age, and education. **Conclusions.** All forms of dysfunctional parenting investigated were
58 associated with affective vulnerability. However, at a multivariate level, only maternal and paternal
59 over-protection remained independently associated with affective vulnerability. This study
60 contributes to our understanding of the role of parental over-protection as a risk factor for the
61 development of affective vulnerability and on the potentially pathogenic role played by this parental
62 style in the development of clinical and sub-clinical conditions.

63

64 **Keywords:** Affective vulnerability; Childhood maltreatment; Over-protection; Perceived
65 dysfunctional parenting; Psychopathology.

66

67 **1. Introduction**

68 Childhood maltreatment (CM) is widely demonstrated the most potent predictor of symptoms
69 severity and negative prognosis for almost all psychiatric disorders and for affective disorders in
70 particular (Lippard and Nemeroff, 2020). For this reason, the identification of different forms of
71 CM is a challenging problem for researchers and clinicians. Among the most frequent causes of CM
72 there are different types of stressful and traumatic events that occur repeatedly and cumulatively
73 within specific relationships and contexts which are in most cases perpetrated by parents or other
74 caregivers (Farina et al., 2019). Indeed, dysfunctional parenting, such as emotional abuse, neglect
75 and over-protection, has been compared to other forms of CM and demonstrated to be, like other
76 forms of early relational trauma, one of the major risk factors associated with almost all
77 psychopathological symptoms (Adenzato et al., 2019).

78 A growing amount of studies explored the effect of perceived parenting on personality traits
79 and psychopathology using self-report questionnaires such as the Parental Bonding Instrument
80 (PBI; Parker et al., 1979), that assesses care and over-protection, and its revised version, the
81 Measure of Parental Style (MOPS; Parker et al., 1997), that assesses perceived indifference, over-
82 control/over-protection, and abuse for each parent. Specifically, it has been recently showed that
83 parental over-protection may be as traumatic as other types of childhood adversities (Sar et al.,
84 2020). Parental over-protection can be defined as maternal and/or paternal psychological over-
85 control, intrusion and restriction of autonomy and independence (Parker, 1983; Parker et al., 1979).
86 Like other forms of CM and developmental trauma, higher levels of perceived parental over-
87 protection are demonstrated (Boucher et al., 2017; Lim and Barlas, 2019; Sar et al., 2020) to be
88 related to relational problems, emotional and behavioral regulation difficulties and
89 psychopathological symptoms (e.g., depression). Moreover, similar to other forms of CM higher
90 levels of parental over-protection are correlated to less favorable outcomes of psychotherapy
91 (Asano et al., 2013).

92 The purpose of this study was to extend previous findings investigating the unique
93 contribution of parental over-protection in predicting affective vulnerability, a psychopathological
94 dimension characterized by anxiety sensitivity and negative affectivity and related to several
95 harmful psychological sequelae (McHugh and Kneeland, 2019).

96

97 **2. Materials and Methods**

98 *2.1 Participants*

99 Participants were 296 university students [73 men; mean age: 21.19±2.35 years (min/max: 18-34);
100 mean education level: 14.89±1.50 years]. Exclusion criteria were: diagnosis/history of major
101 neuropsychiatric disorders; inability to understand written Italian and the refusal to provided written
102 consent. A checklist with dichotomous items was used to assess inclusion/exclusion criteria and
103 socio-demographic data (Adenzato et al., 2019). All participants contributed voluntarily, received
104 information about the general purpose of the research, and did not receive payment or academic
105 credit. The study was approved by the European University's ethics review board according to the
106 Helsinki declaration standards. A priori power analysis (G*Power 3.1 software) indicated that, a
107 sample size of 287 was required to provide a satisfactory statistical power ($1-\beta=95\%$ with to
108 identify a small/moderate effect size ($f^2=0.085$) in a two-sided test ($\alpha=0.05$) with 9 tested
109 predictors.

110

111 *2.2 Measures*

112 Participants were individually administered the MOPS (Parker et al., 1997), the Beck Depression
113 Inventory-II (BDI-II; Beck et al., 1996), the Spielberger's State-Trait Anxiety Inventory- Form-Y
114 (STAI-Y; Spielberger et al., 1983) and the Toronto Alexithymia Scale (TAS-20; Bagby et al.,
115 1994).

116 The MOPS is a 30-item self-report which separately assess maternal (15 items) and paternal
117 parental (15 items) styles related to the first 16 years of life. It is the revised version of the PBI with

118 items grouped in three dimensions for each parent, confirmed through principal components
119 analysis (Parker et al., 1997): indifference, over-control/over-protection, and abuse. Higher scores
120 reflect higher self-reported dysfunctional parenting.

121 The BDI-II is a 21-item self-report instrument assessing depressive symptoms over the
122 previous 2 weeks, with higher scores indicating greater severity.

123 The STAI-Y is a 20-item self-report questionnaire commonly used to assess state (i.e.,
124 STAI-Y1) and trait anxiety (i.e., STAI-Y2), with higher scores indicating greater severity.

125 The TAS-20 is a 20-item self-report measure commonly used to assess alexithymia traits
126 (i.e., difficulty describing feelings, difficulty identifying feeling, and externally-oriented thinking)
127 with higher scores indicating greater emotional processing impairment.

128 Studies examining the psychometric properties of the MOPS (Parker et al., 1997), the BDI-
129 II (Beck et al., 1996), the STAI-Y (Spielberger et al., 1983), and the TAS-20 (Bagby et al., 1994)
130 have demonstrated good internal consistency, construct validity, and test-retest reliability.

131

132 *2.3 Statistical analyses*

133 SPSS 18.0 statistical package for the social sciences has been used to perform all statistical
134 analyses. Missing values were replaced with the individual's mean for the relevant total
135 scale/subscale for protocols with 2 missing items or less. No protocols have more than two missing
136 data. Affective vulnerability has been investigated combining trait and state anxiety, depression and
137 alexithymia through principal axis factoring. Indeed it has been widely reported the strong
138 association between these dimensions in both clinical and non-clinical samples (e.g., Di Tella et al.,
139 2020; Marchesi et al., 2000). In particular, it has been recently observed that all these three factors
140 are significant predictors of difficulties in emotion regulation. (Di Tella et al., 2020) Lastly, all
141 these dimensions are known to be associated with CM (e.g., Brown et al., 2016).

142 A principal axis factoring was performed in order to reduce the number of components and
143 to find a latent dimension explaining the relationship between the variables related to affective

144 vulnerability. We selected components with eigenvalues ≥ 1 and then calculated factor scores for
145 each individual using the regression method.

146 The relationships among variables were assessed using Pearson's r correlation coefficients.
147 In order to investigate the unique contributions of different forms of dysfunctional parenting on
148 Affective Vulnerability, all MOPS subscales as well as socio-demographic variables (i.e., sex, age,
149 level of education) were inserted in a linear regression analysis with this new latent dimension as
150 the dependent variable. The associations were reported as standardized beta coefficients (β) and
151 their p values. The predictors were entered simultaneously into the regression. Assumptions of
152 multiple regression were checked and fixed according to Williams et al. (2013). Cook's distances
153 was also computed. Collinearity was assessed through the statistical factor of tolerance and
154 Variance Inflation Factor (VIF).

155

156 **3. Results**

157 Fifty-seven participants (19.3%) met the criteria for significant level of depressive symptoms (i.e.,
158 BDI-II total score ≥ 20), 42 participants (14.2%) met the criteria for clinical level of trait-anxiety
159 symptoms (i.e., STAI-Y2 total score ≥ 60), and 40 participants (13.5%) met the criteria for
160 alexithymia (i.e., TAS total score ≥ 61).

161 The principal axis factoring analysis yielded a one-factor model with eigenvalues of 1 or
162 higher (i.e., eigenvalues = 2.84), with all clinical variables loaded on factor #1 accounted the
163 70.90% of the variance of the data: BDI-II total score (0.83), TAS total score (0.63), STAI-Y1 total
164 score (0.75), STAI-Y2 total score (0.92). All MOPS subscale were positively associated with all
165 clinical variables as well as with the Affective Vulnerability factor ($r \geq 0.25$; **supplementary Table**
166 **1**).

167 Assumptions of multiple regression were respected with the exception of the
168 Homoscedasticity. Thus, the weighted least squares (WLS) method was performed. The linear
169 regression analysis is reported in **Table 1**. The models explained the 19% of the variability of the

170 Affective Vulnerability factor ($F_{9,282} = 8.61; p < 0.001$). Among different forms of dysfunctional
171 parenting, maternal ($\beta = 0.19; p = 0.007$; **Figure 1A**) and paternal ($\beta = 0.18; p = 0.010$; **Figure 1B**)
172 over-protection were independently associated with this new latent dimension, so that a more severe
173 over-protection was associated with more affective vulnerability, even when controlling for the
174 presence of socio-demographic variables. The statistical factor of tolerance and VIF showed that
175 there were no interfering interactions between the variables (i.e., tolerance values > 0.10 and VIF
176 of < 5). Cook's distances was also satisfactory (i.e., max value = 0.049).

177

178 **4. Discussion**

179 We explored in a sample of young adults the unique contribution of perceived parental over-
180 protection in predicting on affective vulnerability (i.e., a latent dimension we found that explains
181 the relationship among depression, anxiety and alexithymia traits).

182 Our results showed that all forms of dysfunctional parenting were associated with affective
183 vulnerability. However, at a multivariate level, our findings show that only maternal and paternal
184 over-protection, remained independently associated with affective vulnerability so that the higher
185 the level of parental over-protection the higher the level of affective vulnerability. This result is
186 significant even after controlling for the effects of sex, age, and level of education and is in line
187 with recent studies (Boucher et al., 2017; Lim and Barlas, 2019; Sar et al., 2020) showing that
188 higher levels of perceived parental over-protection are related to emotional and behavioral
189 dysregulation, and psychopathological symptoms. Moreover, our results are consistent also with
190 neurobiological and clinical data (e.g., Farber et al., 2019) that suggest, as well as for other forms of
191 child maltreatments, a specific pathogenic role of overprotective parenting style on later functional
192 and structural alterations of brain regions involved in generating and regulating affective states and
193 responses to threat.

194 According to the attachment theory (Bowlby, 1977) a healthy development requires the
195 balance between safeness of attachment and exploratory behaviors. Following this theoretical

196 framework, we suggest that the pathogenic potential of the over-protective parenting style can
197 transmit to the child both the idea of oneself as weak and incapable to autonomously explore the
198 environment and the idea of a threatening world. This parental style is in contrast with the more
199 healthy and adaptive encouragement to psychological autonomy and exploration of the environment
200 (Parker, 1983). Although a linear causal relationship between perceived over-protective parenting
201 style and affective vulnerability cannot be affirmed, it is possible to suggest that among the
202 consequences of this kind of parental style there are, at varying degrees of severity, the progressive
203 restriction of autonomy in response to a world perceived as threatening (anxiety), the invalidation of
204 one's emotions (alexithymia), and the development of feelings of worthlessness and devaluation
205 (depression).

206 Different factors may contribute to explain why in our sample only parental over-protection,
207 but not other forms of perceived dysfunctional parenting such as indifference and abuse, was
208 independently associated with affective vulnerability. It is possible that the parental over-protection
209 is more socially acceptable to reveal in a self-administered questionnaire and this makes it easier to
210 emerge than abuse or indifference. It is also possible that in a non-clinical population the significant
211 percentage of participants returning zero scores (in the range 0-3 of the MOPS) for perceived
212 parental indifference and, particularly, for perceived parental abuse makes it difficult to draw firm
213 conclusions about the association between affective vulnerability and these two forms of
214 dysfunctional parenting. On the other hand, the opposite is also possible, namely that in clinical
215 populations the role played by indifference and abuse may have often overshadowed the less
216 obvious role played by over-protection, a role that here we contributed to highlight.

217 Overall, our results, consistently with previous findings (e.g., Asano et al., 2013), suggest
218 the importance of taking into account perceived parental overprotection as an adverse event of
219 childhood in clinical reasoning and therapeutic management.

220

221 *4.1 Limitations*

222 This study has some limitations. First, as previously mentioned, in principle we cannot exclude that
223 the use of self-report instruments might have inhibited some participants from revealing painful
224 experiences of one's childhood. Structured interviews conducted in clinical settings could reveal
225 dysfunctional parenting that would otherwise be undetectable. Secondly, the present study
226 examined dysfunctional parenting in a sample of young students. Future larger cohorts studies
227 should recruit participants with more heterogeneous sociodemographic characteristics.

228

229 **5. Conclusion**

230 In spite of its limitations, the present study contributes to shed new light on the role of parental
231 over-protection as a risk factor for the development of affective vulnerability and provides further
232 support for the hypothesis authoritatively proposed by Bowlby (1977) who conceived dysfunctional
233 parenting not only as the failure to provide care but also as the excessive over-protection or control.
234 Thus, future research should take grater account of the potentially pathogenic role played by the
235 over-protective parental style, both acted by the mother and by the father, in the development of
236 clinical and sub-clinical conditions.

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293 **Legend to the Figure**

294

295 **Figure 1. Panel A:** Scatterplot of the correlation between affective vulnerability and maternal over-
296 protection: values are adjusted (i.e., standardized residuals) for sex, age, educational level and other
297 MOPS subscales. **Panel B:** Scatterplot of the correlation between affective vulnerability and
298 paternal over-protection: values are adjusted (i.e., standardized residuals) for sex, age, educational
299 level and other MOPS subscales.

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301