

Recall of threat and submissiveness in childhood and psychopathology:

The mediator effect of self-criticism

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Abstract

Research has robustly shown that early negative parenting experiences are associated with psychopathology and self-criticism, in adulthood. This study investigates recall of personal feelings of perceived threat and subordination in childhood and its relation with psychopathology. In addition, we explore the mediator role of self-criticism in this association. A sample of 193 subjects from the general population completed self-report questionnaires measuring the study variables. The mediator analyses suggested that the impact of submissiveness experiences in childhood on depression and anxiety is mediated by self-criticism. Our findings highlight the route through which the recall of personal feelings of perceived involuntary subordination to parents contributes to depression and anxiety in adulthood.

Keywords: Recall of threat and submissiveness experiences in childhood; Self-criticism; Depression and Anxiety

Key Practitioner Points:

- Although the relation between early experiences of abuse and later psychological problems is now well established, there has been less study on subtler forms of threat and subordinate behaviour in childhood. Given ours and previous findings, therapists should be aware of, and prone to explore, these early experiences.
- Most studies exploring early negative experiences mainly refer to lack of warmth or parental intrusiveness. We also highlight the importance of noting rank structure and rank style in the family.
- Self-criticism seems to be a key process in the relation between early aversive experiences of subordination and psychopathology.
- Given the idea that self-reassuring operates through a different affect system, helping people develop inner warmth and compassion for the self may be important to counteract feelings of self-hatred and self-attack.

INTRODUCTION

The relationship between negative experiences in childhood (e.g., abuse, neglect, threat, and low emotional warmth) and psychopathology has been the focus of several theories and has received large empirical support (e.g., Bowlby, 1969, 1973; Parker,

1983; Perris, 1994; Richter, Richter, Eisemann, Seering, & Bartsch, 1994; Rutter et al., 1997). Early parenting experiences are central to human brain development and functioning and to affect regulation (Baumeister & Leary, 1995; Bowlby, 1969, 1973; Gilbert, 1989, 2005, 2007; Guidano & Liotti, 1983; Safran & Segal, 1990; Schore, 1994; Siegel, 2001). Here we focus on how parent-child interactions might be seen in the light of evolutionary conceptualisations of role-forming competencies and its link to psychological distress.

According to Social Rank Theory (Gilbert, 1992), parent-child interactions can be conceptualised as power/hierarchical relations. Whereas in attachment theory (Bowlby, 1969) early negative experiences mainly refer to lack of warmth or parental intrusiveness, in social rank theory the focus is on early experiences of threat and subordination in the family. In this sense, it is suggested that children that fear their own parents and assume forceful and involuntary subordinate positions in the family may adopt several defensive and submissive behaviours. The activation of submissive defensive strategies is design to reduce/deactivate the aggression of the dominant other or its hostile intention (Allan & Gilbert, 1997). If others (parents), seen as more powerful, repeatedly criticise or threaten the child and, in turn, defensive strategies such as escaping or fighting are not possible, then the adoption of a submissive attitude is seen as the only protective strategy. Children with repeated experiences of criticism, shame and rejection in the family context may develop representations of others as powerful, hostile and dominant, and of the self as fragile, submissive and vulnerable. In addition, they will be overly attentive to threats and to the power of others and sensible to their social rank position. Submissive and subordinate displays are also associated with inhibited assertive behaviour, tendency to appease others, avoidance, desires to escape or passivity, poor initiation behaviour and lower positive affect (Allan & Gilbert, 1997;

Gilbert, 2000a; Gilbert et al., 2002). This fearful submissive style has been highly linked to depression (Allan & Gilbert, 1997; Gilbert & Allan, 1998; Gilbert et al., 2002), social anxiety and shame (Gilbert, 2000c). It is important to distinguish *voluntary* from *involuntary* submission in this context. Doing what we are told, follow and comply with others out of fear of the consequences of doing otherwise is a form of involuntary subordination. The experiences associated with fear-based compliance include fear of persecution and punishment/injury, exclusion, withdrawal of approval and love, shame and even loss of identity (Allan & Gilbert, 1997). The feelings associated with involuntary submission are mostly negative, such as depression, anxiety and various forms of resentment. These feelings are normally not present in *voluntary* submission, which is more linked to attraction, rather than fear.

So, it is suggested that children can grow up in environments where they are stressed and fearful, and assume an involuntary subordinate position in the family. These early experiences will impact on stress responses (Perry et al., 1995), shape physiological development (Schoore, 2001; 1994) and influence the construction of self-other schema (e.g., seeing the self as inferior to others; Baldwin, 1992).

These early experiences may also be at the core of the development of self-criticism. Irons, Gilbert, Baldwin, Baccus and Palmer (2006) highlight that the recall of parents as rejecting and controlling is significantly related to self-criticism. Also Koestener, Zuroff and Powers (1991), in a longitudinal study, found that children who experienced their parents as excessively restrictive and rejecting were more likely to develop self-criticism. In contrast, it is believed that children can develop a self-reassurance style if parents have behaved towards them in a caring and non-shaming way at times of failure and disappointment; i.e., with warmth and affection (Gilbert, Clarke, Hempel, Miles, & Irons, 2004). According to Baldwin (1992, 2005) people

internalise their relationships with significant others in the form of cognitive structures or relational schemas that influence not only their experiences of subsequent relationships (self-to-other schemas) but also their sense of self and self-relating (self-to-self schemas). A child that has been repeatedly criticised, shamed or rejected learns an interpersonal script, or relation schema, of others as being powerful, hostile and dominant and of the self as subordinate and vulnerable to their attacks and rejection. The other-to-self schema can then be recruited to self-to-self relationships or, in other words, people may come to think about and treat themselves in the way others have (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006).

Standing from an evolutionary perspective, Gilbert (1989, 2000b) suggests that innate role-forming systems evolved for social relating (e.g., dominant-subordinate or affiliative) can be recruited into self-to-self relationships, and hence people may adopt submissive and appeasing orientations to their own self-attacks (Gilbert & Irons, 2005). In this sense, Gilbert (2005) and Gilbert and Irons (2005) argue that people's interactions with themselves (critical or warm and accepting) operate through similar psychological systems to those used to relate to others. So, we respond to our own attacks and condemnations with the same response systems that we use to deal with external attacks and threats (Gilbert, 2005). This self-to-self relationship that characterises self-criticism, just as dominant-subordinate other-self interactions, will reinforce feelings of inferiority and submissiveness. Therefore, self-criticism can be seen as an internal process that activates the same subordinated-defeat strategies used to respond to external threat signals, and it is the activation of this threat system that leads to negative emotions and psychopathology (Gilbert, 2005, 2007). If we feel trapped with our inner self-attacks, and beaten into submissive defeat, then this can be particularly important in the development of depression (Gilbert & Allan, 1998). In a

study by Whelton & Greenberg (2005) participants were asked to sit in one chair and imagine him/herself in another chair criticizing themselves. They were then invited to switch chairs and respond to the self-criticism. Individuals high in self-criticism displayed a submissive stance, expressing sadness and shame and feeling unable to counteract their own attacks. Also Greenberg, Elliott and Foerster (1990) suggested that it is the inability to defend oneself against one's self-attacks that results in depression.

In short, it is suggested that self-criticism may result from the internalisation of relationships and scripts, as outlined in the relational schema approach (e.g., Baldwin & Fergusson, 2001). The evolutionary approach (Gilbert, 1989) adds that there are evolutionary brain systems that allow for specific forms of relating (e.g., dominant-subordinate), that can be recruited to self-to-self relationships.

In recent years, research has moved away from a conceptualization of self-criticism as a single entity with a unitary function. For example, Gilbert and colleagues (2004), in a student sample, found that self-criticism comprises two functions: *self-correction* regards the improvement of the self, to try harder, avoid making mistakes and to maintain certain standards. A sense of defeat arises when the person simply feels unable to do this; *self-persecution/attacking* refers to hurting the self because of self-disgust or hate, with a wish for revenge and destruction of parts of the self considered "bad", "weak", "contaminating" and that should "be eliminated". In the same study, Gilbert and colleagues (2004) also explored the forms of self-criticism: feeling the self as inadequate and inferior (*inadequate self*); and feeling disgust and hate for the self (*hated self*). An alternative response is self-support and self-compassion, focused on positive memories and attributes about the self (*reassured self*). So, people can be self-critical to try to correct their behaviour, or because they have an active dislike of, or

hatred for the self, or in alternative can be relatively warm and reassuring to themselves. Self-criticism is typically activated when people feel that they have failed in important tasks or when “things are going wrong”. Pathogenic qualities of self-criticism are linked to two basic processes: the hostility degree, contempt and subjacent self-directed repugnance (Gilbert et al., 2004; 2006; Whelton & Greenberg, 2005; Zuroff, Santor, & Mongrain, 2005) and a relative incapacity of generating feelings of warmth, self-soothing and acceptance (Gilbert et al., 2004; Neff, 2003).

Empirical evidence shows that self-criticism pervades many disorders, especially depression, and it has been the focus of several therapies (Blatt & Zuroff, 1992; Gilbert & Irons, 2005; Gilbert & Procter, 2006; Zuroff et al., 2005). Zuroff, Koestner and Powers (1994) suggest that the degree of self-criticism in childhood is a predictor of later adjustment. Also Hartlage, Arduino and Alloy (1998) showed that self-criticism might constitute an enduring trait of depression. Gilbert and colleagues (2001) found that both in self-critical thoughts of severe depression and in schizophrenia malevolent voices, the degree in which the individuals experience these “internal attacks” as powerful and dominant is significantly associated with depression. Teasdale and Cox (2001) showed that a lowering of mood leads recovered depressed people to become more self-critical than people who were never depressed. In addition, Irons et al. (2006) found that self-criticism and lack of abilities to be self-reassuring mediated the relation between negative emotional memories and depression, in students. Mongrain, Vettese, Shuster and Kendall (1998) suggested that self-criticism was associated with feelings of being subordinate and inferior and with poor affiliative relationships with others.

Considering the theoretical and empirical review on aversive early parenting experiences and self-criticism described above, we hypothesise that self-criticism may

be a mediator in the relationship between recall of threat and submissiveness in childhood and psychopathological symptoms, such as depression and anxiety.

This study, therefore, sets out to explore the association between different forms of self-criticism, recall of aversive early parenting experiences and psychopathology, in a sample from the Portuguese population. Our first hypothesis is that individuals who recall feeling frightened of one's parents and having behaved in subordinate ways in one's family will show more inadequate and hostile self-criticism, than those whose recalls of submissiveness are less significant. We hypothesize also that recall of threat and submissiveness in childhood will be significantly associated with depressive and anxious symptoms. In addition, we intend to test a mediator model in which it is predicted that the forms of self-criticism mediate the association between recall of threat and submissiveness in childhood and psychopathology.

METHOD

Participants

The sample is comprised by subjects from the general population and was collected in various Portuguese districts between 2007 and 2008. The participants' exclusion criteria were: (a) age inferior to 18 years and superior to 65, (b) incomplete filling in of the scales and (c) clear evidence of the infringement of the response instructions.

The final sample comprises 193 subjects, 67 males (34.7%) and 126 females (65.3%). The age range was 18-65 with a mean age of 35.01 ($SD = 11.62$). No significant differences were found regarding gender, $t(191) = -0.368$; $p = .713$, years of education, $t(191) = -1.18$; $p = .240$, civil status, $\chi^2(4) = 3.61$; $p = .462$ and occupation, $\chi^2(2) = 2.73$; $p = .256$.

Measures

Each participant completed an assessment battery that included several self-report questionnaires.

Recall of Parent Rearing

The Early Life Experiences Scale (ELES; Gilbert, Cheung, Granfield, Campey, & Irons, 2003; Portuguese version by Lopes & Pinto-Gouveia, 2005). ELES was designed to measure recall of perceived threat and subordination in childhood. Many of the ‘recall of parenting rearing’ instruments focus on recall of parental behaviours rather than personal feelings. This scale in particular focus on themes related to social rank theory (e.g., Gilbert, 1992; 2002), and consists of 15 items focusing on recall of perceived threat (six items) and feeling subordinate and acting in a submissive way (nine items). The subjects assess the frequency and veracity of the statements regarding the self, using a 5-point *Likert* scale (ranging from *completely false* to *very true*), concerning the childhood period. Examples of perceived threat items are: ‘In order to avoid getting hurt I used to try to avoid my parents’, ‘My parents exerted control by threats and punishments’. Examples of submissiveness items are: ‘If I didn’t do what others wanted I felt I would be rejected’, ‘I often had to go along with others even when I did not want to’. The factorial analysis led to the extraction of three factors: *threat*, *submission* and *unvalued*. The authors obtained Cronbach’s alphas of .92 for the total scale and of .89, .85 and .71 for each subscale, respectively.

Self-Criticism

Forms of Self-Criticizing/attacking and Self-Reassuring Scale (FSCRS, Gilbert, Clarke, Hempel, Miles & Irons, 2004; Portuguese version, Castilho & Pinto-Gouveia, in press). The scale consists of 22 items assessing the way people self-criticise/attack and self-sooth ‘when things go wrong’. Participants rate a series of situations in a 5-point *Likert* scale (ranging from 0 = *not at all like me*, to 4 = *extremely like me*). This measure is composed by three factors: *inadequate self*, which assesses feelings of inadequacy of the self; *hated self*, which assesses a feeling of self-repugnance/disgust and a destructive response to failures and setbacks characterized by self-dislike and an aggressive/persecuting desire to hurt the self; *reassured self*, which indicates the ability to be self-soothing/reassuring when facing faults and failures. In the original version, the internal consistency of the scale was of .90 for the *inadequate self* and .86 for the *hated self* and the *reassured self* (Gilbert et al., 2004).

Psychopathology

Depression Anxiety Stress Scales (DASS-42; Lovibond & Lovibond, 1995, translation and adaptation: Pais-Ribeiro, Honrado & Leal, 2004). DASS is a self-report scale which evaluates the affective states of depression, anxiety and stress. It comprises 42 items describing negative emotional symptoms, that the subject has to rate in a 4-point *Likert* scale of severity and frequency (ranging from 0 = *not apply at all to me*, to 3 = *applied to me most of the time*). The scale is composed by three subscales: *depression*, *anxiety* and *stress*, each one consisting of 14 items. The subjects assess the extent to which they experienced each symptom, during the previous week. In the original version, Lovibond and Lovibond (1995) found that the subscales showed high internal consistency: Cronbach’s alpha of .91 for *depression*, .84 for *anxiety* and .90 for *stress*.

Procedure

A convenience sample was collected from the general population, recruited within public institutions and private corporations (e.g., schools and other public sector departments, banks...). The institutions' boards were contacted, the research aims were clarified and authorisation was obtained so that their employees could participate in the study. The questionnaires were preceded by a page informing the subjects about the study aims, importance of their participation and confidentiality. This page also contained some socio-demographic questions. In line with the ethical requirements, it was emphasized that participants' cooperation was voluntary and that their answers were confidential and would only be used for this study purpose. Then, the self-report questionnaires were filled in by volunteers in the presence of the researcher taking, on average, twenty minute to complete.

Analytical strategy

This study has a cross sectional design with self-report measures. The predictor variables were recall of threat and submissiveness in childhood (ELES). The dependent variables were depression and anxiety, measure by DASS. Self-criticism is assumed to be the mediator and was measured using FSCRS. Pearson correlations were performed to explore the relationships between predictor variables, outcome variables and the mediators. Linear regressions were used to explore the hypothesised mediational model on each dependent variable.

A mediational model, as described by Baron and Kenny (1986), was tested (Figure 1). Variable M is considered a mediator if (1) X significantly predicts Y ($c \neq 0$); (2) X significantly predicts M ($a \neq 0$) and (3) M significantly predicts Y, controlling for

X ($b \neq 0$). A mediation is present if a previously significant relation between the independent and dependent variables turns insignificant when paths a and b are controlled for. A full mediation occurs when path c becomes zero and so path c2 is zero. A partial mediation is established when, after the mediator is controlled for, the path from X to Y is reduced in absolute size but is still different from zero.

[Insert Figure 1]

RESULTS

Preliminary Data Analyses

Preliminary data analyses were conducted to examine the violation of tests' assumptions. The normality of variables was assessed by the *Kolmogorov–Smirnov Test*. The results showed that several variables are not normally distributed. However, *skewness* and *kurtosis*' values were not severely biased, as these were below the recommended cut-off points (Table 1). Although there are few clear guidelines to interpret skew and kurtosis indexes, a more or less established rule of thumb is that absolute values of skewness greater than 3.00 are described as extremely skewed and absolute values of kurtosis greater than 10.00 indicate extreme kurtosis (Kline, 1998).

Also, a series of tests were conducted to examine the suitability of the current data for regression analysis. We performed an analysis of residuals scatter plots since it provides a test of assumptions of normality, linearity and homoscedasticity between dependent variables scores and errors of prediction. Our data showed that the residuals were normally distributed, had linearity and homoscedasticity. Also, the independence of the errors was analysed and validated through graphic analysis and the value of *Durbin–Watson* (values ranged between 1.725 and 2.027). No evidence of the presence

of multicollinearity or singularity amongst the variables was found. These aspects were validated by the *Variance Inflation Factor (VIF)* values that indicated the absence of β estimation problems ($VIF < 5$). In general, the results indicate that these data are adequate for regression analyses.

Descriptives

Descriptive analyses were conducted, and the means, standard deviations and Cronbach's alphas of the study variables are presented in Table 1.

[Insert Table 1]

As it can be observed, all scales showed good to very good internal consistencies. Gender differences were tested regarding the study variables and no significant differences were found.

Correlation analyses

Pearson correlation coefficients (two-tailed) were performed to explore the relationships between predictor variables, outcome variables and the mediators (Table 2).

[Insert Table 2]

Results showed that the recall of threat and submissiveness in childhood was positively correlated with inadequate self and hated self. Reassured self was not significantly correlated with threat and submissiveness subscales. The associations

between recall of threat and submissiveness and psychopathological scores were rather weak. The recall of threat experiences in childhood had significant but relative low positive correlations with anxiety and depression. Correlations between submissiveness in childhood and anxiety and depression were slightly higher. In addition, the negative dimensions of self-criticism (i.e. to focus on inadequacy of the self, or hatred for the self) showed positive correlations with depressive and anxious symptoms. Self-reassuring was not significantly correlated with anxious symptoms, presumably indicating that one can be anxious and also be self-reassuring and supportive. In contrast, self-reassuring had a negative correlation with depression.

These results are in accordance with recent research pointing to the relationship between negative early experiences in childhood and an internalised critical style (Sloman & Atinkson, 2000; Gilbert & Irons, 2004; Irons et al., 2006) and its contribution to vulnerability to psychopathology.

The Mediator Effect of Self-criticism on the Relationship between Recall of Threat and Submissiveness in childhood and Psychopathology

A mediational model, as described by Baron and Kenny (1986), was tested. In addition, we present the results of the *Sobel* test. This test relies on normally distributed data for adequate power, and determines the significance of the indirect effect of the predictor variable on outcomes through its effects on the mediator. The mediation is partial if *Sobel z* is $p < 0.05$; the mediation is full if *Sobel z* is $p < 0.01$.

Recall of Threat and Submissiveness in Childhood and Depression

A regression analysis was conducted with recall of threat and submissiveness as the independent variables and depression as the dependent variable. The model was

significant, $F(2,190) = 7.08$, $p \leq .001$, accounting for 6% of the variance of depressive symptoms. Only submissiveness showed to be an independent predictor of the outcome ($\beta = .29$; $p = .009$) and, for this reason, only this variable will be considered in the following steps of the mediational model. Next, we tested whether submissiveness predicted inadequate self. The model was also significant, $F(1,191) = 50.00$; $p \leq .001$, with $\beta = .46$; $p \leq .001$. Finally, a regression analysis was performed to test the hypothesised mediation effect. Both submissiveness and inadequate self were entered as the independent variables and depression as the dependent variable. The final model was significant, $F(2,190) = 26.96$; $p \leq .001$, accounting for 21% of depression variance. Results showed that when the mediator is added, submissiveness becomes non-significant, $\beta = .06$; $p = .381$, pointing to a complete mediation. *Sobel Test* confirmed that this indirect effect was significant ($z = 4.58$; $p \leq .001$).

A similar procedure was conducted with hated self as the hypothesised mediator variable. First, when submissiveness in childhood was entered as the independent variable and hated self as the dependent variable, a significant model was found, $F(1,191) = 49.84$; $p \leq .001$, with $\beta = .46$; $p \leq .001$. On the second step, a regression analysis was conducted to examine whether hated self predicted depressive symptoms. The model was also significant, $F(1,191) = 64.58$; $p \leq .001$, with $\beta = .50$; $p \leq .001$. Finally, submissiveness in childhood and hated self were entered as the independent variables and depression as the dependent variable. The final model was significant, $F(2,190) = 32.37$; $p \leq .001$, accounting for 25% of depression variance. Regression coefficients analysis showed that when the mediator is added, the predictor β is reduced to .04 and becomes non-significant ($p = .543$), pointing to a complete mediation effect. *Sobel Test* was significant ($z = 2.00$; $p = .001$), confirming the total mediation.

Recall of Threat and Submissiveness in Childhood and Anxiety

The mediator effect of self-criticism in the relation between recall of threat and submissiveness in childhood and anxiety followed the same steps. A regression analysis was conducted with recall of threat and submissiveness in childhood entered as the independent variables and anxious symptoms as the dependent variable. The model was significant, $F(2,190) = 10.12; p \leq .001$, accounting for 8.7% of anxious symptoms. Only submissiveness showed to be an independent predictor of the outcome, $\beta = .29; p = .008$, and was entered as the only predictor variable in the following steps of the model. The next step of the model was tested previously, confirming that submissiveness significantly predicts inadequate self. Finally, when we entered submissiveness and inadequate self as independent variables and anxiety as the dependent variable the model was significant, $F(2,190) = 30.44; p \leq .001$, accounting for 24% of anxiety variance. Results showed that when the mediator is added, β of the predictor is reduced and becomes non-significant ($\beta = .11; p = .111$), pointing to a complete mediation. *Sobel Test* confirmed that this indirect effect was significant ($z = 4.29; p \leq .001$).

A similar procedure was conducted, with hated self as the hypothesised mediator variable. The path from the independent variable (submissiveness) to the mediator (hated self) was already tested in the above study. On the second step, a regression analysis was conducted to examine whether hated self predicted anxious symptoms. This model was also significant, $F(1,191) = 45.38; p \leq .001$, with $\beta = .44; p \leq .001$. In the final step, submissiveness and hated were both entered as the independent variables and anxious symptoms as the dependent variable. The final model was significant, $F(2,190) = 24.84; p \leq .001$, accounting for 20% of anxiety variance. Regression coefficients analysis showed that when the mediator is added, the predictor β becomes

non-significant, pointing to the existence of a total mediator effect of hated self. *Sobel Test* confirmed that this indirect effect was significant ($z = 4.06; p \leq .001$).

DISCUSSION

There is empirical and clinical evidence suggesting that early parenting experiences are central to human brain development and functioning, affect regulation and self-other schema (Baldwin, 2005; Baumeister & Leary, 1995; Bowlby, 1969, 1973; Gilbert, 1989, 2005, 2007; Guidano & Liotti, 1983; Safran & Segal, 1990; Schore, 1994; Siegel, 2001). Early exposure to threats in the form of abuse, criticism, rejection, overprotection and neglect are known to be associated with later emotional and social difficulties and can be internalized into forms of self-devaluation and self-critical/attacking cognitions and feelings (Blatt & Zuroff, 1992; Gilbert et al., 2004). Baldwin (1992, 1997) suggests that self-criticism is linked to learned interpersonal scripts, meaning that self-evaluations are derived from internalized relational schema (Baldwin, 1992, 1997; Baldwin & Fergusson, 2001). In the same sense, Gilbert (2000b) pointed that self-criticism may mirror and be adapted from evolved competencies that regulate external relationships.

This study explored the relation between recall of threat and submissiveness in childhood and self-criticism (focusing on inadequacies and self-hating) and their impact on psychopathological symptoms. Particularly, the main goal of this study was to test a mediator model of self-criticism on the association between recall of threat and submissiveness in childhood and depressive and anxious symptoms. In line with our first prediction, we found that recall of threat and submissiveness in childhood was significantly correlated with inadequate self and hated self forms of self-criticism,

suggesting that individuals who recall being forced by their parents to take unwanted or involuntary subordinate positions tend to engage in self-critical processing styles in adulthood, characterised by feelings of inadequacy and desires to persecute or hurt the self for failures. Self-reassurance seems to be negatively, although insignificantly, related to threat and submissiveness experiences in childhood. These results are consistent with the work of Gilbert and Irons (2004) which suggests that when children are subjected to parental experiences of threat and neglect they become more sensitive to threats, more focused on issues of social power and more likely to internalize a critical style. In other words, early parenting experiences influence the development of self-to-self relating (e.g. self-critical versus self-reassuring; Gilbert, 1989, 2000a; Blatt & Zuroff, 1992; Gilbert & Irons, 2004; Irons et al., 2006). Moreover, as found in previous studies (Gilbert, 1993; Sloman & Atinkson, 2000; Irons et al., 2006), a child that feels forced into unwanted or involuntary subordinate positions by parents may adopt various submissive and “low rank” defensive behaviours and may be more vulnerable to depressive and anxious symptoms. In fact, the recall of parents as rejecting and dominants was significantly related to psychopathological symptoms in our study. This is in line with our hypothesis and previous research that showed an association between the recall of negative experiences with parents (such as neglect, threat and rejection) and a range of psychological problems in adulthood (Parker, 1983; Perris, 1994; Richter et al., 1994; Rutter et al., 1997).

Regarding self-criticism, our results suggested that self-critical style is significantly correlated with depressive and anxious symptoms, as found in previous studies (e.g., Blatt & Zuroff, 1992; Gilbert & Irons, 2004, 2005; Gilbert & Procter, 2006; Zuroff et al., 2005). Interestingly, self-reassurance shows a non-significant association with anxious symptoms. This may indicate that people can be anxious and

feel frightened but not necessarily dislike or hate themselves and they can be self-reassuring and supportive. The ability to be self-reassuring was significantly and negatively related to depression, also in line with previous studies (Gilbert et al., 2004; Gilbert et al., 2006). Taken together, these findings corroborate two main ideas: on one hand, the effect of memories of being subordinated in childhood on negative emotions, behaviours and psychological difficulties; and on the other hand, the association between adopting a self-critical and hostile style and vulnerability to anxiety and depression (Greenberg, Elliott, & Foerster, 1990; Whelton & Greenberg, 2005).

Taking into account these data, we further conducted a series of mediation analyses to explore whether, as predicted, negative parental experiences are associated with depression and anxiety via the way children (and later adults) develop their self-to-self relating (e.g. as self-critical versus self-reassuring). We found that inadequate self and hated self fully mediated the association between recall of submissiveness in childhood and depressive symptoms. The association between recall of submissiveness in childhood and anxiety followed was also fully mediated by self-criticism. These results suggest that the impact of memories about being forced into unwanted or involuntary subordinate positions by parents on depressive and anxious symptoms may be explained by the emergence of self-criticism.

In conclusion, our results are in line with previous theory (Gilbert, 1989, 2000b, 2005) suggesting that early relating styles and experiences with caregivers will impact on depressive and anxious symptoms. As suggested elsewhere, early experiences of lack of love and warmth may lead to unhappiness and insecurity, whereas stress of rejection and/or hostility and fear in early life may further impact on physiological stress pathways and increase vulnerability to depression and other disorders (Gilbert, 1992).

In addition, our findings further suggest that self-criticism seems to be a key process in the impact of early aversive experiences on depressive and anxious symptoms.

The current findings therefore shed light on the role of memories of submissiveness in childhood and self-criticism in psychopathological symptoms. Although we used a non-clinical sample our results indicate that threat and submissiveness experiences in childhood by caregivers have an impact on psychopathology, via self-criticism. It is expected that these results would be found in clinical samples, with more expressive associations. In fact, recent studies conducted in clinical samples give evidence that early submissiveness experiences, associated with a self-critical style, contribute to a range of psychopathological symptoms (e.g., depression, self-harm; Castilho, 2011). Thus, some therapeutic implications might be drawn from our findings. One of these implications is the importance of working with self-criticism, especially with people with early memories of being subordinate in childhood. Given that a sense of self-warmth and self-reassurance may be key to the development of well-being and mental health, the focus on the development of these skills in the therapeutic context may be crucial (Gilbert, 2005).

There are a number of weaknesses in this study. First, its transversal design represents an important methodological limitation. Although our results are in line with the theoretical background, prospective studies should be conducted in future to extend our understanding of the causal relations between the variables. Second, our findings may not be representative of other populations (college students, clinical populations), hence the sample needs to be extended in what concerns socio-demographic variables. Third, the reliance on self-report measures and retrospective reports. However, regarding the use of retrospective reports, evidence reviewed by Brewin, Andrews and Gotlib (1993) suggest that claims that retrospective reports are inherently unreliable are

exaggerated. These authors concluded that adult recollections of central features of an early experience are generally accurate and reasonably stable over time, pointing to a fundamental integrity to one's autobiographical recollections. Also, they noted that there is little support for the claim that recall of childhood experiences is distorted by depressed mood. Fourth, other related constructs, such as shame and submissive behaviour, can be included in the model.

Nevertheless, our study has highlighted the way through which early negative rearing experiences may influence depression and anxiety in adulthood, emphasising the role of self-criticism. We also hope to have brought to light the importance of noting the rank structure in the family, and not just the attachment style.

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REFERENCES

Allan, S., & Gilbert, P. (1997). Submissive behaviour and psychopathology. *British Journal of Clinical Psychology*, 36, 467–488. doi: 10.1111/j.2044-8260.1997.tb01255.x

- Baldwin, M. W. (1992). Relational schemas and the processing of social information. *Psychological Bulletin*, *112*, 461–484. DOI: 10.1037//0033-2909.112.3.461
- Baldwin, M. W. (1997). Relational schemas as a source of if-then self-inference procedures. *Review of General Psychology*, *1*, 326-335. doi: 10.1037/1089-2680.1.4.326
- Baldwin, M. W. (Ed.), (2005). *Interpersonal Cognition*. New York: The Guilford Press.
- Baldwin, M. W., & Fergusson, P. (2001). Relational schemas: The activation of interpersonal knowledge structures in social anxiety. In W. R. Crozier, & L. E. Alden (Eds.), *International handbook of social anxiety: Concepts, research and interventions to the self and shyness* (pp.235-275). Chichester: J. Wiley & Sons.
- Baumeister, R., & Leary, M. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*, 497-529. doi: 10.1037/0033-2909.117.3.497
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173-1182. doi: 10.1037/0022-3514.51.6.1173
- Beck, A. T. (1967). *Depression: Clinical, experimental and theoretical aspects*. New York: Harper & Row.
- Blatt, S., & Zuroff, D. (1992) Interpersonal relatedness and self-definition. Two prototypes for depression. *Clinical Psychology Review*, *12*, 527-562. doi:10.1016/0272-7358(92)90070-O
- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. London: Hogarth Press.
- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation, anxiety and anger*. London: Hogarth Press.

- Brewin, C. R., Andrews, B., & Gotlib, I. H. (1993). Psychopathology and early experiences: A reappraisal of retrospective reports. *Psychological Bulletin*, *113*, 82-98. doi: 10.1037/0033-2909.113.1.82
- Castilho, P. (2011). Modelos de relação interna: Auto-criticismo e auto-compaixão. Uma abordagem evolucionária compreensiva da sua natureza, função e relação com a psicopatologia [Self-criticism and self-compassion: An evolutionary approach of its nature, function and relation with psychopathology]. Unpublished doctoral thesis
- Castilho, P., & Pinto-Gouveia, J. (2011). Auto-criticismo: Estudo de validação da versão portuguesa da Escala das Formas do Auto-Criticismo e Auto-Tranquilização (FSCRS) e da Escala das Funções do Auto-Criticismo e Auto-Ataque (FSCS). [Self-criticism: Validation of the Portuguese versions of the Forms of Self-criticising/attacking and Self-reassuring Scale (FSCRS) and the Functions of Self-Criticism/Attacking Scale (FSCS)]. *Psychologica*, *54*, 63-87.
- Gilbert, P. (1989). *Human nature and suffering*. London: Lawrence Erlbaum Associates.
- Gilbert, P. (1993). Defence and safety: Their function in social behaviour and psychopathology. *British Journal of Clinical Psychology*, *32*, 131–154. doi: 10.1111/j.2044-8260.1993.tb01039.x
- Gilbert, P. (2000a). Varieties of submissive behaviour: Evolution and role in depression. In L. Sloman & P. Gilbert (Eds.), *Subordination and defeat: An evolutionary approach to mood disorders* (pp. 3–46). Hillsdale, NJ: Lawrence Erlbaum.
- Gilbert, P. (2000b). Social mentalities: Internal ‘social’ conflicts and the role of inner warmth and compassion in cognitive therapy. In P. Gilbert & K. G. Bailey

(Eds.), *Genes on the couch: Explorations in evolutionary psychotherapy*.

London: Routledge.

Gilbert, P. (2006b). The relationship of shame, social anxiety and depression: The role of evaluation of social rank. *Clinical Psychology and Psychotherapy*, 7, 174-189.
doi: 10.1002/1099-0879(200607)7:3<174::AID-CPP236>3.0.CO;2-U

Gilbert, P. (Ed.) (2005). *Compassion: Conceptualisations, research and use in psychotherapy*. London: Brunner-Routledge.

Gilbert, P., & Allan, S. (1998). The role of defeat and entrapment (arrested flight) in depression: An exploration of an evolutionary view. *Psychological Medicine*, 28, 585–598.

Gilbert, P., Allan, S., Brough, S., Melley, S., & Miles, J. (2002). Relationship of anhedonia and anxiety to social rank, defeat and entrapment. *Journal of Affective Disorders*, 71, 141–151. doi:10.1016/S0165-0327(01)00392-5

Gilbert, P., Baldwin, M. W., Irons, C., Baccus, J. R., & Palmer, M. (2006). Self-criticism and self-warmth: An imagery study exploring their relation to depression. *Journal of Cognitive Psychotherapy*, 20(2), 183-200.

Gilbert, P., Cheung, M., Grandfield, T., Campey, F., & Irons, C. (2003). Recall of threat and submissiveness in childhood: Development of a new scale and its relationship with depression, social comparison and shame. *Clinical Psychology and Psychotherapy*, 10, 108-115. doi: 10.1002/cpp.359

Gilbert, P., Clarke, M., Hempel, S., Miles, J.N.V., & Irons, C. (2004). Criticizing and reassuring oneself: An exploration of forms, styles and reasons in female students. *The British Journal of Clinical Psychology*, 43(1), 31-50.

- Gilbert, P. & Irons, C. (2004). A pilot exploration of the use of compassionate images in a group of self-critical people. *Memory*, *12*, 507-516. doi: 10.1080/09658210444000115
- Gilbert, P., & Irons, C. (2005). Focused therapies and compassionate mind training for shame and self-attacking. In P. Gilbert (Ed.), *Compassion: Conceptualisations, Research and Use in Psychotherapy*. London: Brunner-Routledge.
- Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self criticism: Overview and pilot study. *Clinical Psychology and Psychology*, *13*, 353-379. doi: 10.1002/cpp.507
- Gilbert, P., Birchwood, M., Gilbert, J., Trower, P., Hay, J., Murray, B., & Miles, J. N. V. (2001). An exploration of evolved mental mechanisms for dominant and subordinate behaviour in relation to auditory hallucinations in schizophrenia and critical thoughts in depression. *Psychological Medicine*, *31*, 1117-1127. doi: 10.1017/S0033291701004093
- Greenberg, L. S., Elliott, R. K., & Foerster, F. S. (1990). Experiential processes in the psychotherapeutic treatment of depression. In C. D. McCann, & N. S. Endler (Eds.), *Depression: New directions in theory, research and practice* (pp. 157-185). Toronto: Wall & Emerson.
- Guidano, V. F., & Liotti, G. (1983). *Cognitive processes and emotional disorders: A structural approach to psychotherapy*. New York: The Guilford Press.
- Hartlage, S., Arduino, K., & Alloy, L. B. (1998). Depressive personality characteristics: State dependent concomitants of depressive disorder and traits independent of current depression. *Journal of Abnormal Psychology*, *107*, 349–354. doi: 10.1037/0021-843X.107.2.349

- Irons, C., Gilbert, P., Baldwin, M., Baccus, J., & Palmer, M. (2006). Parental recall, attachment relating and self-attacking/self-reassurance: Their relationship with depression. *British Journal of Clinical Psychology, 45*, 297-308. doi: 10.1348/014466505X68230
- Kline, R. (1998). *Principles and practice of Structural Equation Modeling*. New York: The Guilford Press.
- Lovibond, P., & Lovibond, S. (1995). The structure of negative emotional states: Comparison of the depression anxiety stress scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy, 33*(3), 335-343. doi:10.1016/0005-7967(94)00075-U
- Mongrain, M., Vettese, L. C., Shuster, B., & Kendal, N. (1998). Perceptual biases, affect and behavior in relationship of dependents and self-critics. *Journal of Personality and Social Psychology, 75*, 230-241. doi: 10.1037/0022-3514.75.1.230
- Neff, K. (2003). Self-compassion: An alternative conceptualisation of a healthy attitude toward oneself. *Self and Identity, 2*, 85–102. doi: 10.1080/15298860390129863
- Pais-Ribeiro, J. L., Honrado, A., & Leal, I. (2004). Contribuição para o estudo da adaptação portuguesa das escalas de depressão ansiedade stress de Lovibond e Lovibond. *Psychologica, 36*, 235-246.
- Parker, G. (1983). *Parental overprotection: A risk factor in psychosocial development*. New York: Grune and Stratton.
- Perris, C. (1994). Linking the experience of dysfunctional parental rearing with manifest psychopathology: A theoretical framework. In C. Perris, W. A. Arrindell, & M. Eisemann (Eds.), *Parenting and psychopathology*. Chichester: Wiley.

- Perry, B. D., Pollard, R. A., Blakley, T. L., Baker, W. L., & Vigilante, D. (1995). Childhood trauma, the neurobiology of adaptation and ‘use—dependent’ development of the brain: How ‘states’ become ‘traits’. *Infant Mental Health Journal*, *16*, 271–291. doi: 10.1002/1097-0355(199524)16:4<271::AID-IMHJ2280160404>3.0.CO;2-B
- Richter, J., Richter, G., Eisemann, M., Seering, B., & Bartsch, M. (1994). Depression, perceived parental rearing, and self-acceptance. *European Psychiatry*, *10*, 290–296. doi:10.1016/0924-9338(96)80310-5
- Rutter, M., Dunn, J., Plomin, R., Simonoff, E., Pickles, A., Maughan, B., Ormel, J., Meyer, J., & Eaves, L. (1997). Integrating Nature and Nurture: Implications of person–environment correlations and interactions for developmental psychopathology. *Development and Psychopathology*, *9*, 335–364. doi: 10.1017/S0954579497002083
- Safran, J. D., & Segal, Z. V. (1990). *Interpersonal process in cognitive therapy*. New York: Basic Books.
- Siegel, D. J. (2001). Toward an interpersonal neurobiology of the developing mind: Attachment relationships “mindsight” and neural integration. *Infant Mental Health Journal*, *22*, 67-94. doi: 10.1002/1097-0355(200101/04)22:1<67::AID-IMHJ3>3.0.CO;2-G
- Schore, A. (1994). *Affect regulation and the origin of the self: The neurobiology of emotional development*. Hillsdale, N.J: Lawrence Erlbaum.
- Schore, A. (2001). The effects of early relational trauma on right brain development, affect regulation and infant mental health. *Infant Mental Health Journal*, *22*, 201–269. doi:10.1002/1097-0355(200101/04)22:1<201::AID-IMHJ8>3.0.CO;2-

- Sloman, L., & Atkinson, L. (2000). Social competition and attachment. In L. Sloman, & P. Gilbert (Eds.), *Subordination and defeat. An evolutionary approach to mood disorders* (pp. 3–46). Hillsdale, NJ: Lawrence Erlbaum.
- Teasdale, J., & Cox, S. (2001). Dysphoria: Self-devaluative and affective components in recovered depressed and never depressed controls. *Psychological Medicine, 31*, 1311-1316. doi: 10.1017/S003329170100424X
- Whelton, W., & Greenberg, L. (2005). Emotion in self-criticism. *Personality and Individual Differences, 38*, 1583-1595. doi: 10.1016/j.paid.2004.09.024
- Zuroff, D. C., Koestner, R., & Powers, T. A. (1994). Self-criticism at age 12: A longitudinal study of adjustment. *Cognitive Therapy and Research, 18*, 367–385. doi: 10.1007/BF02357511
- Zuroff, D. C., Santor, D. A., & Mongrain, M. (2005). Dependency, self-criticism, and maladjustment. In J. S. Auerbach, K. J. Levy, & C. E. Schaffer (Eds.), *Relatedness, self-definition and mental representation: Essays in honor of Sidney J. Blatt*. Brunner-Routledge: London.