LINKING THE TWO SIDES OF A COIN

Shame in pathological narcissism

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Sommario

ABSTRACT

Attending to both psychodynamic models and self-regulatory models of narcissism, shame is a core affect of narcissistic pathologies. Indeed, recent conceptualizations of pathological narcissim encompass both grandiose and vulnerable themes under a core dysfunction of self-esteem regulation and interpersonal antagonism. The present works aim at investigating the relationship between pathological narcissistic traits and shame in community samples. In addition to previous studies, the current works consider narcissism from multiple perspectives, relying on different operationalizations of the construct. Also, they focus both on dispositional measures of narcissism and shame, as well as state assessments of the constructs.

Study 1 presents cross-sectional data from a community sample (N = 367; M_{age} = 33.67) for the validation of the Italian version of the Personal Feelings Questionnaire-2 (PFQ-2), a measure of maladaptive shame- and guilt-proneness. Confirmatory Factor Analysis shows that a modified two-factor model fits data and can be replicated fairly well across genders. Both guilt- and shame-proneness show sensible associations with criterion measures, whereas concerns regarding potentially weak items are also discussed. Findings globally corroborate a distinction between shame and guilt and support the validity of the PFQ-2.

Study 2 presents additional analyses performed on data from the first study. Associations between pathological narcissism (grandiose and vulnerable) and shame-proneness are investigated at the cross-sectional level, adopting different operationalizations of the construct of pathological narcissism. Results show that trait grandiose narcissism is associated with reduced shame-proneness, whereas trait vulnerable narcissism with heightened shame-proneness. Facet-level analyses show a more nuanced pattern of associations, where power-related aspects and hostile tendencies are associated with reduced shame-proneness, whereas

need for admiration, low trust, self-esteem fragility and grandiose fantasies are related to higher shame-proneness.

Study 3 is a daily diary study investigating experiences of shame in association with different measures of pathological narcissism (trait and state), under different situations, and controlling for potential confounds (e.g., self-esteem). Nonclinical participants (N = 196; M_{age} = 22.32) completed baseline measures and responded to daily questionnaires for 28 days. Multilevel models indicate that trait grandiose narcissism predicts daily shame across different models, whereas trait vulnerable narcissism only emerges as a specific risk factor for shame when experiencing higher social stress. Daily shame is particularly associated with grandiose fantasies. Also, state grandiose and vulnerable narcissism are mostly positively associated with daily shame.

Overall, results demonstrate the specificity of the emotional experience of shame (i.e., compared to guilt), and highlight the key role of shame in pathological narcissistic functioning. This suggests that shame should be acknowledged and recognized both in clinical and research settings.

Keywords: pathological narcissism, shame-proneness, guilt-proneness, daily shame, daily diary

PREFACE

An anonymous English saying states that "*you can"t give up shame without giving up pride*". Similarly, an Italian proverb on shame would sound in English as "*when arrogance gallops, there is shame sitting on the back of the horse*" ["*quando la superbia galoppa, la vergogna siede in groppa*"]. Hence, common sense and popular sayings connect manifestations of pride, arrogance and grandiosity to feelings of inferiority and shame, so that both shame is the result of pride, and pride is led by shame.

This conception of arrogance and shame echoes the descriptions of narcissism as a two-sided coin, a concecptualization that has been an important part of psychological literature on narcissism and its pathological manifestations. Indeed, it is now widely recognized that pathological narcissism involves both grandiose and vulnerable manifestationos (e.g., Miller et al., 2011; Pincus et al., 2009). However, the nature of the relationship between grandiose and vulnerable aspects is still controversial, as only part of psychological literature embraces the two-sided coin narrative.

In a general sense, psychodynamic accounts of pathological narcissism often described grandiosity as a compensation against feelings of insecurity or emptiness, recognizing to some degree the presence of an inner – usually unacknowledged and denied – fragility (Kernberg, 1975; Kohut, 1971). At the same time, more recent models have described narcissism as a set of regulatory strategies to maintain a high self-esteem, based on the idea that narcissists' self-views are simultaneously extremely positive and extremely fragile (Morf & Rhodewalt, 2001; Pincus & Lukowitsky, 2010; Ronningstam, 2010). On the other hand, other positions suggest that grandiose and vulnerable themes can be better described as two different coins, rather than two sides of the same construct (Campbell & Miller, 2011), given their highly divergent nomological correlates (Miller et al., 2011).

Among those who describe pathological narcissism as based on a hidden fragile sense of self, the affect of shame in particular is considered to play a *key role* (Broucek, 1982). Psychodynamic contributions described shame as the "*veiled companion of narcissism*" (Wurmser, 1987, p. 64), or "*the underside of narcissism*" (Morrison, 1989). This peculiar centrality assigned to shame builds on its nature as a *narcissistic* emotion, to the extent that it emerges out of negative self-evaluations, it relates to one's own global sense of self-worth, and impacts self-esteem and global self-regulation (e.g., Lewis, 1971a).

The present work develops within the framework of a multidimensional conceptualization of pathological narcissism, that tends to consider grandiose and vulnerable expressions as potentially interacting manifestations of personality maladjustment. However, the work does not aim at claryfing the nature of the relationship between grandiose and vulnerable narcissism in general, nor is able to settle this ambituous question. The dissertation is rather focused on the specific theme of shame, and its declinations in narcissistic functioning.

What follows is organized to briefly cover and review existing theoretical and empirical investigations of shame in pathological narcissism, as well as to present a set of three empirical studies conducted during the last three years with the aim of further developing the theme. Chapters I and II describe the main theoretical contributions relative to the affect of shame, to pathological narcissism, and to the link between the two constructs. Particular attention is granted to psychoanalytic perspectives. However, social-cognitive models and personality psychology also provide relevant information on the nature of pathological narcissism, as well as on the antecedents and descriptions of shame experiences: these perspectives will also be outlined across the chapters. Chapter III introduces previous empirical findings studying shame experiences in narcissism, both in its clinical and subclinical manifestations. Limitations and inconsistencies across previous findings open to the empirical section of the work, presented in chapters IV to VI. The relationship between

pathological narcissism and shame is studied in non clinical samples, with a focus on both dispositional shame and narcissism, as well as state shame and state narcissism in a more dynamic perspective. Finally, Chapter VII presents a general discussion of the studies, and suggests implications for research and clinical psychology.

CHAPTER I

SHAME: AN OVERVIEW

Undervalued and under-researched for many years in psychological literature, shame is nowadays a topic of established interest both in theoretical accounts and empirical research (Lasch, 1992; Weiss, 2015). In a general sense, shame is a dysphoric, highly painful emotion, coming out of self-critical conscious or unconscious processes, and implying a sense of uncomfortable self-awareness that earned it the label of "self-conscious emotion" (Tracy, Robins, & Tangney, 2007). However, defining the constitutive elements of shame is not an easy task. From the '50s onwards, different opinions and points of view have contributed to descriptions and conceptualizations of shame, at the intersection between various fields including psychoanalysis (Lewis, 1971b; Piers & Singer, 1953; Wurmser, 1981), emotion and social-personality psychology (e.g., Tracy & Robins, 2004; Tracy et al., 2007), and cognitive psychology (e.g., Miceli & Castelfranchi, 2018). Despite not necessarily contrasting, such conceptions focused on different elements, causes and antecedents of the emotional experience of shame. For instance, social and cognitive theories emphasized the role of causal attributions as determinants of shame, whereas psychodynamic theories mostly described shame in terms of discrepancies between the real self and the ideal self. These differences in theoretical background make it difficult to sketch the borders of shame in a univocal way.

Whilst developed in different ways, there are central features of shame that have been object of theoretical and empirical investigation throughout different perspectives. Among them, a common idea is that shame is related to the "self". In particular, discussion has been carried out around the centrality of a defective self-perception as a determinant of shame (Lewis, 1971b), in that shame arises from comparisons with ideal internalized standards, implying self-evaluative processes. Moreover, shame has been connected to the feeling of being exposed, observed, and seen in one's own flaws: individuals' accounts of shame usually

include reference to "being seen", with the one who watches as an external or internalized instance. Finally, when referring to the emotional experience of shame, it is useful to account for differences with other emotions such as guilt, embarrassment, humiliation, or basic emotions, with the intent of clarifying the distinguishing elements of the experience of shame. The present chapter will attempt to summarize such central nodes of debate and discussion, in the aim of both understanding shame and outlining its importance for research in clinical and personality psychology.

1.1 Shame is about the self

As already mentioned, shame relates to the self. This is both due to the fact that shame requires a sense of self-awareness and the development of self-representations, and because this emotional experience involves self-evaluative processes (e.g., Lewis, 1971b; Tracy & Robins, 2004). Clearly, the construct of self takes on different shades of meaning depending on the theoretical background one refers to. Here, we will summarize psychodynamic perspectives, as well as briefly discuss the contributions of emotion and social-personality psychology.

1.1.1 Shame and the self in psychoanalysis

The concept of self in psychoanalysis was initially developed by Kohut (e.g., 1971, 1977). In a general sense, the self can be basically described as the centre of subjectivity and productive initiative (Kohut, 1977): the concept of self refers to the "*experiential registration of the person's activities as his own*" (Lewis, 1971b, p. 30), and includes a deep sense of agency. Also, it is described as a content of the psyche, rather than one of its structures: the product of the representations regarding the person as object of his/her own subjective experience, partly conscious and partly unconscious, certainly deeply rooted in one's somatopsychic experience (Bolognini, 2002).

Attending to Morrison (1983), shame remained in the shadows in psychoanalysis until the emergence and affirmation of the concept of self. Indeed, Freud mentioned shame and humiliating emotional experiences in some of his writings (e.g., Freud, 1911; 1930; 1933), but he (and subsequent Freudian psychoanalysts) mostly focused on the development of guilt connected to the Oedipal situation and castration anxiety. Also, Klenian psychoanalysts were initially characterized by a relative neglect of the topic of shame (e.g., Steiner, 2011), being as they are distant from the conceptualizations of self-psychology.

Starting from the '70s, however, psychoanalytic contributions on shame progressively emerged. Both Freudian (e.g., Wurmser, 1981) and Klenian authors (e.g., Steiner, 2011) focused on the relevance of shame experiences, even though their contributions differed in the degree to which they emphasized conflicts or deficits in the explanation of shame inner dynamics, as well as on the role attributed to psychic structures such as the ego ideal and the superego.

Kohut named shame in his writings and especially used, as Morrison suggests (1983), the language of shame throughout his works. He described shame in relation to failures of the ideal omnipotent self and disturbances in the early development of the self in primary relationships: shame was conceived as a reaction to frustrations of omnipotence and exhibitionism in individuals whose self was fragile and vulnerable due to interferences in early narcissistic development (Kohut, 1972; Morrison, 1983). In some passages, Kohut also attempted a metapsychological formulation of the emotion of shame[1]. In spite of his interest

[1] See for instance this passage written in 1972: "*I said that [shame] develops under the following conditions. Exhibitionistic libido is mobilized and deployed for discharge in expectation of mirroring and approving responses either from the environment or [...] from the idealized superego, i.e., from the internal structure that took over the approving functions from the archaic environment. If the expected response is not forthcoming, then the flow of the exhibitionistic libido becomes disturbed. Instead of a smooth suffusion of self and body-self with a warm glow of approved and echoed exhibitionistic libido, the discharge and deployment processes disintegrate. [...] The exhibitionistic surface of the body-self, the skin, shows therefore not the pleasant warmth of successful exhibitionism, but heat and blushing side by side with pallor. It is this disorganized mixture of massive discharge (tension decrease) and blockage (tension increase) in the area of exhibitionistic libido that is experienced as shame*" (Kohut, 1972, p. 394)

in the theme, however, some authors noted a difficulty in his works in recognizing the importance of shame dynamics, especially with regard to pathological narcissism (Broucek, 1982; Morrison, 1983): his suggestions would be further elaborated by other psychoanalysts, setting the foundations for a more extensive exploration of the theme.

A contemporary of Kohut, Helen Lewis (1971a; 1971b), suggested that "*the self is an important construct in the psychological dissection of these state* [shame and guilt]", and that "*since the self is the focus of awareness in shame, 'identity' imagery may be evoked.* […] *Shame is about the self, it is thus a 'narcissistic' reaction, evoked by a lapse from the ego ideal*" (Lewis, 1971a). Lewis believed that shame involved the self as a whole: when experiencing shame, the person is entirely affected and becomes deeply self-conscious and acutely aware of the failure to attain to the goals of the ego ideal. Hence, Lewis connected the experience of shame to a tension between internalized ideals and the real self: despite referring to the ego ideal, she also described the content of consciousness in shame as related to the sense of identity (Lewis, 1971a), partly moving away from a structural Freudian perspective. Similarly to her, Morrison (1983), suggested that the concept of ideal self is a more useful concept to the psychology of shame, compared to the concept of the ego ideal. Morrison stated that the difference between the two constructs stands in the fact that the ego ideal is the result of the introjections of goals, ideals, and valued object representations, guiding the person in life as a "North Star"; the ideal self, despite closely connected to the ego ideal, is more related to the actual experience of self toward which one aspires, representing "*the subjective experience of how closely one approximates that beacon's direction*" (Morrison, 1983). In this sense, the ideal self would be a more adequate construct to describe and capture the inner experience of shortcoming central to the affect of shame.

Attending to Morrison (1983), previous accounts of shame in psychoanalysis – such as the work of Piers and Singer (1953) – already hinted at the concept of *self* in the psychology of shame, despite still moving within a classic Freudian metapsychological framework. Piers

and Singer (1953) described shame as the product of a tension between the ego ideal – as a function of the Freudian superego – and the ego. The ego ideal, including awareness of one's own goals, positive identifications, as well as narcissistic needs, may come to conflict with the ego whenever ideal goals are not attained: in this situations, a threat of abandonment and rejection arises (rather than a threat of castration, as in guilt), giving birth to the experience of shame.

Beyond being described in relation to the ideal self or the ego ideal, shame is considered to arise from an internal discrepancy between *who I am* and *who I think I ought to be in order to be lovable, admirable, or worthy*. The experience of shame, indeed, not only involves the self, but also implies a sense of *defective* self, that is unable to reach an internalized set of personal ideal standards. Léon Wurmser (1981), one of the most significant authors in the psychoanalytic investigation of shame, suggested that shame is always underlain by feelings of being "defective, dirty, and weak". This triad of feelings activates the fear of rejection and abandonment, as previously suggested, to the extent that the person does not feel lovable and deserving. As Wurmser (1981) argues, a discrepancy between the ego function of self-perception and ego ideal would be however not sufficient to elicit shame. Retrieving the concepts of a psychoanalysis centered on inner conflicts (Wurmser, 1991), he suggested that shame can not only be a matter of low self-esteem and diminished self-regard, as mostly accounted in the field of self-psychology: it would come out of a contemptuous, aggressive self-punishing process, carried out by the superego. In his view, shame therefore acquires a cold and paralyzing characterization: as much as guilt, it implies a self-torture; however, whereas in guilt the superego would use rage and hatred towards the ego, shame comes from disdain and depreciation. The self is treated as if it was not worthy of any love and consideration (Lasch, 1992; Wurmser, 1981) and its value is diminished to nothing.

1.1.2 Other perspectives on shame and the self

Social-personality psychologists and psychologists studying emotion and cognition have also insisted on the role of self-representations and self-awareness for the experience of self-conscious emotions, such as shame (e.g., Tracy & Robins, 2004). Attending to Tracy and Robins (2004), shame is a cognitively complex emotion that requires – as a necessary prerequisite – the formation of self-representations. As they state, "*to experience shame, an individual must have the capacity to form stable self-representations; internalize external, societal, or parental perspective on those self-representations; and reflect on the discrepancy between his or her own behavior, external evaluations of that behavior, and various self-representations*" (p. 108). In their view, shame is the result of a self-evaluative process indicating that a person has failed to live up to an ideal self-representation. In this sense, not only shame requires the development of self-concept, but also implies attentional focus directed towards the self, and the ability to recognize a discrepancy between a desired self and the actual self. Shame is therefore inextricably linked to perceived failures in one's core self (Klass, 1990; Tangney, Miller, Flicker, & Barlow, 1996; Tracy & Robins, 2004; Tracy et al., 2007). Similarly to Lewis, (1971b), researchers in emotion and cognition have also suggested that shame involves a negative evaluation of the whole self. In other words, in addition to discrepancies in self-representations due to internal causes, shame also requires that the person considers the external eliciting event as the result of stable and global individual characteristics (Tracy & Robins, 2004). Individuals experience shame when they fail to attain to a standard, considering this failure as their own responsibility, and attributing it to core features of their self-representations that become object of a negative self-evaluation. This is what makes shame so pervasive and painful. Also, according to this point of view, the importance of self-concept would make shame a rather complex emotion, that appears in the proper sense only after the acquisition of self-awareness and self-representations in individual development (around the second or third year of life). For this reason, some authors argue that

shame appears and develops much later than basic emotions in the life course (Lagattuta & Thompson, 2007; Lewis, 1992; Tracy & Robins, 2004).

1.2 Being seen

In his essay *Being and Nothingness,* Jean-Paul Sartre (1953) describes the affect of shame as emerging from the judging glance of the other that observes the person in the act of transgressing a social norm (i.e., spying on someone). The gaze of the other induces a sense of self-consciousness in a previously "*unreflective consciousness*", that was until then not even "*inhabited by a self*" (p. 260). In his description of being seen, Sartre gives great importance to the glance of the other as a foundation to one's self-consciousness. However, as suggested by Dolezal (2017), the philosopher also seems to acknowledge that the presence of the other is not a necessary condition for experiencing shame: in many of his examples on the feeling of being observed, the other is indeed only imagined, or potential. Hence, shame can emerge out of how individuals see themselves, rather than merely of how others see them. In other words, shame can "*arise in one's own eyes*" (Dolezal, 2017, p. 425). Nonetheless, Dolezal recognizes that shame is also commonly associated with the concepts of visibility and exposure and has its primary locus in social experiences. Such philosophical considerations are at the core of one of the most debated topics around shame: namely, how tied to the social context this affect is (Morrison, 1983).

Psychoanalyst Léon Wurmser (1981) suggested that shame always has a subject and an object pole. The subject pole refers to the aspect of the self that the person is ashamed of; the object pole (as related to the *object* in psychoanalytic terms) refers instead to the presence of a factor in the face of which the person feels ashamed. In other words, someone may be ashamed of losing control (subject pole) in the face of a significant other that may become disapproving and reproaching (object pole). Both poles exist in any shame experience: as Wurmser clearly explains, the objective pole is originally represented by a person (e.g., the

mother), but becomes with time more and more internalized as a part of the superego. Hence, what would be crucial in the experience of shame is the presence of an (internal or external) observing instance.

Theoretical and empirical studies of shame have not gone much further than Wurmser's considerations. Despite early anthropological literature had emphasized the public dimension of shame (e.g., compared to the private context in which guilt emerges) (Ausubel, 1955; Benedict, 1946), there is nowadays wide agreement – not only in psychoanalysis – that individual development results in a progressive internalization of the observing instance that triggers experiences of shame (e.g., Miceli & Castelfranchi, 2018; Morrison, 1983; Tangney et al., 1996; Tracy & Robins, 2004). Also, there is empirical evidence that shame is experienced both in the presence of others, as well as in solitary situations (Tangney et al., 1996).

At the same time, many descriptions and investigations of shame still emphasize the role of visual exposure, and describe the urge to "hide from view" that is usually brought about by experiences of shame (e.g., Dolezal, 2017; Steiner, 2011; Tangney, Burggraf, & Wagner, 1995). Indeed, the very etymology of shame in most languages (see for instance Dolezal, 2017; Wurmser, 1981) either refers to hiding and covering, or recalls the genitals as if suggesting a need to conceal one's own body. Freud himself mentioned shame in the context of the fear of being exposed, of genital visibility (Freud, 1896, 1930), as well as genital deficiency in women (Freud, 1933).

As Klenian psychoanalyst, John Steiner affirms that "*shame comes to play an important role as we come* into *view and become preoccupied with* being seen" (2015, p. 1592). In opposition to the maternal approving gaze that encourages self-esteem and a sense of identity, as described by Winnicott (1965) or Kohut (1971), a judging gaze undermines self-regard and produces experiences of shame. Steiner operates a distinction between the anxieties of seeing – such as those related to seeing the object as it is, good and bad at the same time – and the

anxieties of being seen, among which he includes feelings of shame, humiliation and embarrassment (Steiner, 2011; 2015). Steiner also proposes a connection between the anxieties of being seen, the presence of an observing and judging object with persecutory characteristics, and the third-object (usually the father) in the classic Oedipal situation (Britton, 2018). The Oedipal father is able to mutilate or attack (castration anxiety), but also capable of humiliating and inducing shame. The superego, heir of the Oedipus complex, becomes at one point the internal representative of the observing object, an internal instance that may induce feelings of shame and humiliation. This brings us back to the humiliating aspect of the superego already described in Wurmser (1981), and so central to the experience of shame. Interestingly, Steiner (1993; 2011) developed the construct of "psychic retreats", referring to refuges of the mind where vulnerability, embarrassment, shame, and humiliation can be avoided or at least hidden.

In summary, shame experiences seem to be triggered somewhere at the intersection between the internal and the external word. On the one hand, the less one feels vulnerable regarding one's own self, the less one fears exposure and shame: this means that the judging other is close to powerless if one does not recognize some truth in his judgment (Wurmser, 1981). At the same time, however, shame is also an experience that most likely originates in social interactions and, as a result of the internalization of external standards, maintains throughout life a deep connection with the feeling of being seen, exposed, and penetrated by a real or imagined gaze with a judging and persecuting quality. Thus, shame seems to be both a private and a social experience.

1.3 Shame and other emotions

As Fehr and Russell (1984) wrote, "*Everyone knows what an emotion is, until asked to give a definition*" (p. 464). Our difficulty in defining something exquisitely experiential through language may be one of the reasons why emotions are also described by comparing

them one another. Shame makes no exception: works have been written distinguishing it from basic emotions (e.g., Tracy & Robins, 2004), as well as other self-conscious emotions, particularly guilt and embarrassment (e.g., Lewis, 1971a; Tangney et al., 1996).

1.3.1 Basic emotions

With basic emotions psychologists usually refer to those emotions that are biologically based, linked to universal facial expressions, independent from culture, and even shared with animals. Anger, fear, disgust, sadness, happiness, and surprise are usually included within the set of basic emotions (e.g., Ekman, 1992; Ekman, Levenson, & Friesen, 1983). Even though shame may appear similar to some of them, such as sadness or anger, there are several underlying specificities that differentiate shame (and self-conscious emotions in general) from basic emotions (for a review see Tracy and Robins, 2004). First, shame would require self-awareness and self-representations in order to be elicited (see paragraph 1.1.2), while basic emotions do not. Self-conscious emotions would also be directed towards attainment of social goals (e.g., conforming to social norms), whereas basic emotions are especially linked to survival and reproductive goals. Furthermore, rather than being manifested through universal facial expressions – as is the case for basic emotions – shame is more likely to be noted due to more complex signals, including bodily postures or head movements, in addition to facial cues (e.g., lowering the head, looking away, or withdrawing) (Lewis, 1992). Finally, compared to basic emotions, and given their relevance for social interactions and goals, self-conscious emotions are thought to be influenced by culture to a greater extent than basic emotions. In particular, it has been proposed that individualistic *vs* collectivistic values within a certain culture – that is, the personal *vs* social basis of self-definition and identity (Bedford & Hwang, 2003; Fischer, Manstead, & Rodriguez Mosquera, 1999) – may have a role in shaping individuals' propensity to experience self-conscious emotions and their correlates (Goetz & Keltner, 2007). With regard to shame, eastern (i.e, collectivistic) cultures usually

value this affect in more positive ways than western (i.e., individualistic) cultures: this may also lead to more positive beliefs about shame, and higher preoccupation for its interpersonal consequences rather than for its impact on self-esteem (Edelstein & Shaver, 2007; Fischer et al., 1999; Wallbott & Scherer, 1995). In this sense, culture shapes the experience of self-conscious emotions in ways that do not affect basic emotions.

1.3.2 Guilt

In his harsh paper on shame on the *The New Republic* of August 1992, historian and sociologist Cristopher Lasch wrote that "*when* [differentiating shame and guilt] *becomes the overriding issue, both concepts undergo a certain trivialization. Guilt loses the suggestion of conscientious self-condemnation, while the element of self-condemnation in shame comes to be viewed merely as an unfortunate byproduct of unrealistic expectations*" (p. 29). In spite of a certain agreement with the view that distinctions between shame and guilt can become too intricate, it is also true that virtually every scientific contribution on shame is accompanied by a description of guilt, and vice versa. This is due to a series of reasons that make the two emotions difficult to differentiate: neither the type of eliciting events, nor the setting they occur in (i.e., public *vs* private context) significantly help distinguishing the two emotions (Tangney, Stuewig, & Mashek, 2007). Also, experiential similarity and lexical confusion in the terms used to describe them are a further source of overlap (Harder & Lewis, 1987; Tangney et al., 1996). Indeed, scores of the two emotions usually correlate from moderately to highly in empirical research (Averill, Diefenbach, Stanley, Breckenridge, & Lusby, 2002; Harder, Cutler, & Rockart, 1992; Harder & Greenwald, 1999; Harder & Zalma, 1990; Rüsch, Corrigan, et al., 2007).

The previous paragraphs have already hinted at some differences between the two affects in a psychodynamic perspective: if shame is the result of a tension between the ideal and the real self – or between the ego ideal and the ego – guilt comes from a discrepancy

between the ego and the superego. In fact, guilt feelings origin from transgressions of moral rules due to sexual or aggressive impulses (Piers & Singer, 1953). Hence, shame and guilt are associated with different anxieties: castration anxiety accompanies guilt, while fear of being abandoned and refused accompanies shame (Piers & Singer, 1953). As Wurmser (1981) clarifies, though, the ego ideal is *a part* of the superego and guilt can also result from the comparison with an ideal image. Thus, the difference between shame and guilt stands in the fact that shame implies a comparison of the real self with an ideal self, whereas guilt refers to a comparison with ideal *actions*. In other words, what changes is the focus of the discrepancy: the internalized set of ideal actions involved in guilt has less to do with one's core self, and more to do with motor activity (Wurmser, 1981; see also Lewis, 1971b). For this reason, Wurmser considered shame as a more global affect compared to guilt (see also Lynd, 1958).

In a similar fashion, based on cognitive appraisal approaches, researchers have proposed that both shame and guilt result from internal casual attributions, meaning that individuals attribute the cause of the eliciting event to the self, rather than to external circumstances. However, the more an internal attribution is stable and global – namely an event is perceived as caused by unchanging characteristics of the whole self – the more the person is likely to experience shame. On the other hand, the more an internal attribution is unstable and specific – an event is perceived as caused by a context dependent and delimited feature of the self – the more the person is likely to experience guilt (Tangney et al., 1996; Tracy & Robins, 2004). The globality criterion is sometimes interchanged with the controllability dimension: controllable attributions would be more likely to induce guilt (e.g., "I did something wrong because I did not try hard enough"), whereas uncontrollable attributions would tend to induce shame (e.g., "I did something wrong because I am not able to") (Tracy & Robins, 2007).

In a recent paper, social and cognitive psychologists Maria Miceli and Cristiano Castelfranchi (2018) summarize and question the most popular criteria adopted to distinguish shame from guilt, including the mainstream self-*vs*-behaviour criterion. They argue that, even

when starting from a specific behaviour, guilt may generalize to the whole self (e.g., "I feel guilty for being coward"); at the same time, shame may be limited to specific self-defects[2]. They propose a new perspective in which shame and guilt are differentiated by the criteria of responsibility and harmfulness-inadequacy. In their view, guilt is associated with feeling harmful, and with the perception of being responsible for it, while shame refers to the feeling of being inadequate with respect to one's ideal self, with or without a perception of responsibility. For instance, one can feel ashamed of a congenital disability (no responsibility), or of a moral transgression (responsibility is involved): even when feeling responsible for a moral transgression, however, the focus in shame is not on responsibility, but rather on one's inability to conform to personal expectations for oneself (see also Tangney et al., 2007). In other words, even though both shame and guilt may have to do with the self, guilt impacts on the moral domain of self-esteem and shame focuses on its aesthetic domain (Miceli & Castelfranchi, 2018).

This perspective is interesting, and partly echoes previous conceptualizations. For instance, the idea of responsibility recalls the role of controllable attributions in Tracy and Robins (Tracy & Robins, 2007); also, the importance of inadequacy as the focus of shame is in line with both psychodynamic and social-cognitive theories. The main difference with previous conceptualizations stands in the fact that Miceli and Castefranchi (2018) expand the domain of guilt to the whole self (and to self-esteem). However, even in their view the focus of guilt is on a moral, responsible self: the authors acknowledge that not every attainment of goals has an equal impact on the self. Psychodynamic and social-cognitive authors holding

[2] Interestingly enough, Wurmser (1981) mentions the possibility that shame be elicited in the context of a comparison of *parts* of the self with an ideal image, rather than necessarily the whole self. Also, Lewis (1971a) had previously stated that "*It is possible in moments when one is* not *ashamed to regret of grieve over a specific disfigurement or personal failing. At the moment when one* is *ashamed of specific shortcomings, shame affect involves the whole self*". In this sense, Lewis seems to suggest that the cognitive process behind the affect is secondary to the experiential level of its subjective manifestation: if shame involves the whole self, it is because one *feels* so in the moment of experiencing it. Accordingly, empirical studies also demonstrate that shame – compared to guilt – is described as more intense, dysphoric, and unexpected, as well as accompanied by greater physiological arousal and a higher desire to hide (Tangney et al., 1996).

the view that shame has a greater impact on the self may therefore have considered adequacy-inadequacy issues as more archaic and primitive than moral-non moral issues with regard to self-definition.

A definitive conclusion on the difference between shame and guilt is probably out of reach. Further investigations are probably needed to disentangle the role of the self in both affects, and their impact on self-esteem. For the purpose of our discussion, it may suffice to stick to the idea that shame involves a feeling of unworthiness – and recalls a deep fear of abandonment and disdain – whereas guilt involves the feeling of being responsible for something wrong and harmful – and evokes a fear of punishment and castration. This rough differentiation will also be an important point when discussing the relevance of shame for pathological narcissism.

1.3.3 Humiliation, embarrassment, mortification, and inferiority

Shame not only resembles guilt: it also shares features with experiences of humiliation, mortification, and inferiority. Furthermore, shame overlaps with the emotion of embarrassment, of which it is generally assumed to be a more intense variant (e.g., Wurmser, 1981). Some authors mostly refer to shame as an umbrella term, embracing from milder experiences of embarrassment to more painful experiences of humiliation (Lewis, 1971a; Steiner, 2015). Other authors emphasize the difference of such terms, and highlight the clinical relevance of this differentiation (Pelanda, 1998).

Embarrassment usually follows relatively trivial and transient shortcomings without moral implications. Compared to shame, embarrassment is described as less intense and enduring, less related to the urge for hiding, and usually associated with a more benign perception of others' evaluation (Buss, 1980; R. S. Miller & Tangney, 1994; Tangney et al., 1996). Humiliation, on the other hand, has been described as a heightened form of shame (Steiner, 2015; Wurmser, 1981). In fact, humiliation involves the presence of a ridiculing,

excluding other: humiliating situations are perceived as deeply unfair, and usually engender a series of feelings that go beyond shame (e.g., anger, disappointment) (Elshout, Nelissen, & van Beest, 2017). In a sense, one may say that humiliation is less like a feeling, and more like a situation, that can have very relevant clinical implications.

The term mortification has been used in connection with a loss of control (Wurmser, 1981) and a loss of competence (Pelanda, 1998). As Lewis (1971a) suggested, mortification involves a relatively distant or indirect presence of the other: in other words, compared to shame, mortification is less related to being seen. Also, feelings of inferiority have been conceptualized as involving a discrepancy between the real and the ideal self. However, differently from shame, experiences of inferiority do not involve feelings of being exposed, as well as fear of rejection and self-reproach (Jacobson, 1954; Pelanda, 1998; Wurmser, 1981).

Different intensities, different shades of meaning, different roles attributed to the other: experiences of shame, humiliation, mortification or inferiority can significantly differ at the eye of the researcher and the clinician. However, such differences may be less clear for common people: when they are asked to report on their shame experiences, they may actually refer to a mixture of these situations and affects.

1.4 Psychopathology of shame

Everybody experiences shame to a certain extent. Shame, however, is conceptualized and assessed both as a transient emotional experience (Cavalera, Pepe, Zurloni, Diana, & Realdon, 2017; Turner, 2014) and as a stable disposition (i.e., shame-proneness) (Andrews, Qian, & Valentine, 2002; Tangney, Wagner, & Gramzow, 1992), and appears to be an affect of great relevance in clinical psychology. Individuals high in shame-proneness have consistently shown to report higher levels of psychopathological symptoms and maladaptive functioning: for instance, shame-proneness is related to general psychological distress, eating disorder symptoms, depression, anxiety, self-derogation, and low self-efficacy (Andrews et

al., 2002; Averill et al., 2002; Cavalera et al., 2017; Harder et al., 1992; Harder & Zalma, 1990; Velotti, Garofalo, Bottazzi, & Caretti, 2017). Beyond psychological symptoms, shame-prone individuals have also shown more maladaptive personality configurations, as suggested by lower levels of agreeableness and higher scores in the domain of neuroticism (Harder & Greenwald, 1999). Moreover, associations have emerged between implicit and explicit measures of shame and various Personality Disorder diagnoses (Ritter et al., 2014; Rüsch, Lieb, et al., 2007).

Schoenleber and Berenbaum (2012) proposed that shame not only is related to maladaptive personality, but that its regulation is actually at the heart of personality pathology in most cases. They believed that, given the relevance of shame for the whole self, "*shame and/or the threat of shame may be pervasive across time and situation*" (p. 434). In their perspective, individuals' attempts to regulate and avoid feelings of shame depend on individual differences in their abilities to anticipate shame (shame forecasting), in their propensity to experience it (shame-proneness), and particularly in their perception of shame as an undesirable emotion (shame aversion). These characteristics may be at the core of maladaptive *vs* more adaptive strategies of regulation that, in turn, would fuel the development of personality pathology.

In this sense, understanding shame dynamics is of interest for clinicians: therapists with different theoretical backgrounds have highlighted the importance of considering shame in clinical settings, either in general and more specifically with patients exhibiting narcissistic pathology. For instance, psychoanalyst Sidney Levin (1971) believed that a successful psychoanalysis produces a reduction of feelings of shame. The author suggested that shame appears in the transference as an extreme sensitivity of the patient to the therapist's comments and interpretations, and gives rise to numerous defences, which the therapist has to become aware of in order to avoid patients' resistance. Similarly, Lewis (1971a) suggested that inadequate consideration of feelings of shame can contribute to negative therapeutic reactions

in patients with narcissistic pathology. Accordingly, Kramer, Pascual-Leone, Rohde, and Sachse (2018) recently reported preliminary data on the importance of considering shame in the psychotherapy of patients with narcissistic personality disorder, providing support to the idea that promoting self-compassion has a positive impact on their treatment and well-being.

In summary, when shame is extreme, difficult to regulate, and highly pervasive, it is likely to become an all-embracing affect, that undermines psychological well-being to a great degree. If shame imposes its presence in the minds and bodies of those who feel it, then clinicians and researchers are probably also bound to focus their attention on these emotional experiences, and to regard shame as one of the relevant aspects of maladaptive personality functioning that are worthy of discussion and exploration.

CHAPTER II

SHAME AND PATHOLGOICAL NARCISSISM

"*That concept* [of narcissism] *has become so broad that it covers almost everything and thus has lost most of its usefuleness*" (Wurmser, 1987, p. 74)

"*There are a number of active debates in the narcissism literature, including the question of whether there is any consensus in what is meant by the term*" (Miller, Lynam, Hyatt, & Campbell, 2017, p. 292)

2.1 What is pathological narcissism?

Originally borrowed by a myth (e.g., Ovid, n.d.), the term narcissism was attributed a series of different meanings since its appearance in psychological literature and – even to date – remains controversial and blurred (for a historical review, see Levy, Ellison, & Reynoso, 2011). Narcissism was initially mentioned in relation to sexuality and auto-eroticism (Ellis, 1898; Näcke, 1899). In Freud's writings, it was connected either to psychoses, object choice, and infantile omnipotence (e.g., Freud, 1914). Also, most psychoanalytic authors used the term "narcissism" referring to both a "normal" aspect of development (e.g., infantile narcissistic needs in Kohut, 1971; the mirroring functions of the mother in Winnicott, 1965) and a pathological personality configuration (Kernberg, 1975; Kohut, 1971; Rosenfeld, 1987), frequently with destructive and malignant aspects (Green, 1983; Kernberg, 1984; Rosenfeld, 1964). Finally, modern definitions of narcissism have been inconsistent for a long time across clinical psychology, social/personality psychology and psychiatry (Cain, Pincus, & Ansell, 2008): contemporary conceptualizations hinge upon a series of open questions, including the identification of central versus peripheral features of narcissism, the distinction and

relationship between pathological and normal narcissism, as well as between grandiose and vulnerable phenotypes, and overt or covert manifestations (e.g., Di Pierro, Costantini, Benzi, Madeddu, & Preti, 2019; Miller et al., 2017; Pincus & Lukowitsky, 2010).

In spite of ongoing controversies, however, it is nowadays agreed that pathological narcissism refers to a pathology of self-esteem (Pincus et al., 2009; Ronningstam, 2014). As Pincus and colleagues (Pincus & Lukowitsky, 2010, p. 423) write, "*narcissism can be conceptualized as one's capacity to maintain a relatively positive self-image through a variety of self-, affect-, and field-regulatory processes*". Narcissistic needs of validation, affirmation, and enhancement are a normal part of everybody's life. However, pathological narcissism involves significant deficits in self regulation, and maladaptive strategies to cope with disappointments and threats to a positive self-image (Kernberg, 1998; Pincus et al., 2009; Pincus & Lukowitsky, 2010; Ronningstam, 2010). The core self-esteem problem of narcissism is variably declined, and literature includes reference to both inflated and deflated presentations, with substantial differences and consequent diagnostic and assessment problems.

2.1.1 Narcissism in the DSM

The *DSM*-5 (American Psychiatric Association, APA, 2013) describes Narcissistic Personality Disorder (NPD) as a diagnostic category defined by "*a pervasive pattern of grandiosity (in fantasy or actual behaviour), need for admiration, and lack of empathy*" (pp. 669-670). Specific criteria for the disorder include a grandiose sense of self-importance, grandiose fantasies, need for admiration, sense of entitlement, interpersonal exploitation, lack of empathy, envy, and arrogant behaviours.

Other aspects were originally also included in the previous editions of the manual (*DSM-III*, APA, 1980), such as sensitivity to criticism and instability of self-esteem. However, criteria for the disorder have increasingly narrowed their focus on grandiose and

overt themes (i.e., inflated and explicit presentations) throughout the subsequent editions of the *DSM*, finally remaining unchanged from *DSM-IV-TR* (APA, 2000) to the last edition. Indeed, grandiose themes were progressively considered as more prototypical of narcissism, compared to hypersensitive aspects, as well as more able to increase the validity of the diagnosis and to reduce areas of overlap with other personality disorders (Reynolds & Lejuez, 2011). Thus, hypersensitive aspects now only appear as "associated features" of the disorder in the DSM-5. For instance, the manual mentions vulnerability in self-esteem, suggesting that this aspect "*makes individuals with narcissistic personality disorder very sensitive to "injury" from criticism or defeat.* [...] *Criticism may haunt these individuals and may leave them feeling humiliated, degraded, hollow, and empty*" (p. 671). In this sense, in spite of the clinical relevance of features related to increased sensitivity to injury and self-esteem instability, hypersensitive aspects are not required anymore for the diagnosis of NPD.

Features of narcissistic hypersensitivity are more clearly included in the alternative model for the diagnosis of personality disorders (AMPD), presented in Section III of the DSM-5. The AMPD defines personality disorders (PDs) as characterized by impairments in personality functioning (criterion A) and by the manifestation of specific pathological personality traits (criterion B). According to this model, NPD patients are expected to show moderate impairments in self and interpersonal functioning, and to be characterized by traits of grandiosity and attention seeking (expressions of antagonism). This model, especially in criterion A, acknowledges the presence of both grandiose and vulnerable aspects, as well as overt (i.e., explicit) and covert (i.e., implicit) manifestations of grandiosity (Skodol, Bender, & Morey, 2014): for instance, the AMPD refers to the presence of both inflated and deflated self-appraisal, self-esteem fluctuations, and unstable personal standards. The alternative models, which has proven valid in predicting PD features in general (Few et al., 2013), has also been described as an improvement over the official classification system with specific reference to NPD (Skodol et al., 2014), given its ability to capture a broader range of

narcissistic manifestations. As noted by Madeddu and Di Pierro (2014), however, the AMPD remains an "alternative" model for personality disorder diagnosis: in this sense, potentially doubtful consequences regarding its future use in clinical and research practice can be foreseen. Still, the conceptualization of NPD in the AMPD may be a good starting point to introduce the theme of the complexity of narcissism and its pathological manifestations.

Table 2.1 presents NPD criteria from both the official DSM-5 diagnostic model and from the AMPD.

Table 2.1. Diagnostic criteria for NPD in the *DSM-5*

Section II official criteria (APA, 2013, pp. 669–670)

A pervasive pattern of grandiosity (in fantasy or behavior), need for admiration, and lack of empathy, beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:

1. Has a grandiose sense of self-importance (e.g., exaggerates achievements and talents, expects to be recognized as superior without commensurate achievements).
2. Is preoccupied with fantasies of unlimited success, power, brilliance, beauty, or ideal love.
3. Believes that he or she is "special" and unique and can only be understood by, or should associate with, other special or high-status people (or institutions).
4. Requires excessive admiration.
5. Has a sense of entitlement (i.e., unreasonable expectations of especially favourable treatment or automatic compliance with his or her expectations).
6. Is interpersonally exploitative (i.e., takes advantage of others to achieve his or her own ends).
7. Lacks empathy: is unwilling to recognize or identify with the feelings and needs of others.
8. Is often envious of others or believes that others are envious of him or her.
9. Shows arrogant, haughty behaviors or attitudes.

Section III AMPD criteria (APA, 2013, pp. 767–768)

Typical features of Narcissistic Personality Disorder are variable and vulnerable self-esteem, with attempts at regulation through attention- and approval-seeking, and either overt or covert grandiosity. Characteristic difficulties are apparent in identity, self-direction, empathy, and/or intimacy, as described below, along with specific maladaptive traits in the domain of Antagonism. Diagnostic Criteria**:**

A. Moderate or greater impairment in personality functioning, manifest by characteristic difficulties in two or more of the following four areas:

1. ***Identity***: Excessive reference to others for self-definition and self-esteem regulation; exaggerated self-appraisal may be inflated or deflated, or vacillate between extremes; emotional regulation mirrors fluctuations in self-esteem.
2. ***Self-direction***: Goal-setting is based on gaining approval from others; personal standards are unreasonably high in order to see oneself as exceptional, or too low based on a sense of entitlement; often unaware of own motivations.
3. ***Empathy***: Impaired ability to recognize or identify with the feelings and needs of others; excessively attuned to reactions of others, but only if perceived as relevant to self; over- or underestimate of own effect on others.
4. ***Intimacy***: Relationships largely superficial and exist to serve self-esteem regulation; mutuality constrained by little genuine interest in others' experiences and predominance of a need for personal gain.

B. Both of the following pathological personality traits:

1. ***Grandiosity*** (an aspect of Antagonism): Feelings of entitlement, either overt or covert; self-centeredness; firmly holding to the belief that one is better than others; condescending toward others.
2. ***Attention seeking*** (an aspect of Antagonism): Excessive attempts to attract and be the focus of the attention of others; admiration seeking.

2.1.2 Grandiose and vulnerable narcissism

The themes of pathological narcissism emphasized in the *DSM-5*, as well as in a certain part of empirical and clinical literature, refer to behavioural and intrapsychic features of narcissistic grandiosity. Narcissistic grandiosity is a constellation of pathological personality traits, usually expressed through interpersonally exploitative acts, lack of empathy, envy, aggression and exhibitionism (APA, 2013; Pincus et al., 2009). Grandiosity also involves defensive processes such as repression of negative aspects of the self, or distortion of disconfirming external information (e.g., Horvath & Morf, 2009, 2010; Morf & Rhodewalt, 1993; Raskin, Novacek, & Hogan, 1991), as well as entitled attitudes, inflated self-image, or fantasies of superiority (APA, 2013; Pincus & Lukowitsky, 2010; Pincus & Roche, 2011). It is of note that these grandiose aspects also correspond to laypersons' (Miller, Lynam, Siedor, Crowe, & Campbell, 2018) and experts' (e.g., Lynam & Widiger, 2001; Samuel & Widiger, 2008) view of narcissism.

It is now agreed, however, that the construct of pathological narcissism also refers to a second theme of dysfunction, namely narcissistic vulnerability. This manifestation involves regulatory impairments leading to self-, emotional- and behavioural dysregulation in response to self-enhancement failures. In other words, it refers to the conscious affects of helplessness, emptiness, low self-esteem, and shame, experienced in response to ego-threats in pathologically narcissistic individuals, as well to their tendency towards avoidance of relationships, withdrawal and even suicidal ideation (Pincus & Lukowitsky, 2010; Pincus & Roche, 2011).

The idea of vulnerable expressions of narcissism is not new: as stated above, the *DSM-III* included aspects of hypersensitivity, and clinical literature has been acknowledging the duality of pathological narcissism for a long time. As shown in Table 2.2, the recognition of vulnerable and grandiose aspects in narcissism has a longstanding tradition, and the two manifestations have been identified with different names and labels in both clinical accounts

and empirical literature[1]. However, attempts to systematize studies and theories on the manifestations of pathological narcissism have begun only recently and, despite vulnerable manifestations are now widely acknowledged, the relative relevance of vulnerable and grandiose traits for the NPD diagnosis is still debated.

Table 2.2. Labels for grandiose and vulnerable themes in pathological narcissism (modified from Pincus & Lukowitsky, 2010; Pincus & Roche, 2011)

Source	Grandiose/inflated themes	Vulnerable/deflated themes
Akhtar & Thomson (1982); Akhtar (2003)	Overt	Covert
		Shy
Broucek (1982)	Egotistical	Dissociative
Cooper (1981, 1988, 2005)	Overt	Covert
		Narcissistic-masochistic
Gabbard (1989)	Oblivious	Hypervigilant
Glover et al. (2012); Pincus et al. (2009)	Narcissistic Grandiosity	Narcissistic Vulnerability
	(grandiose narcissism)	(vulnerable narcissism)
Kernberg (1984)	Malignant	
Kohut (1971)	Horizontal Split	Vertical Split
PDM (2006); PDM-2 (2017)	Arrogant/Entitled	Depressed/Depleted
	Inflation of self-esteem	Deflation of self-esteem
Rosenfeld (1987)	Thick-Skinned	Thin-Skinned
Ronningstam (2005b)	Arrogant	Shy
	Psychopathic	
Russ et al. (2008)	Grandiose-malignant	Fragile
Wink (1991, 1992)	Grandiosity-Exhibitionism	Vulnerability-Sensitivity
	Wilful	Hypersensitive

For instance, Miller and colleagues (Miller et al., 2017; Miller, Widiger, & Campbell, 2014) argue that vulnerable features should be considered as peripheral to the construct of narcissism, given that a consensual description of narcissism mostly converges on grandiose themes. On the contrary, other authors suggested that a neglect of vulnerable narcissism may

[1] Note that attending to Pincus and colleagues (Pincus et al., 2009; Pincus & Lukowitsky, 2010; Pincus & Roche, 2011), the terms overt and covert should not be confused with grandiosity and vulnerability and should be used instead to define different modes of expression of both narcissistic grandiosity and vulnerability. In other words, the overt-covert distinction should be viewed as secondary to the distinction between grandiosity and vulnerability, as both can be exhibited either overtly (i.e., explicit behaviours) or covertly (e.g., inner fantasies).

results into blind spots in clnical and research settings, and that vulnerable narcissisitic themes can be considered as markers of regulatory impairments and personality pathology severity in narcissistic configurations (Wright, 2016).

What remains unclear, also, is the nature of the relationship between grandiose and vulnerable manifestations. Some authors tend to view them as two different phenotypes (Campbell & Miller, 2011), whereas others as fluctuating aspects of the same underlying construct (e.g., Pincus et al., 2009; Pincus & Lukowitsky, 2010). Vulnerable manifestations, for instance, may be crystallized in predominantly vulnerable phenotypes but, within the grandiose phenotypic range, may appear as shifts of insecurity, that are either easily bypassed or covered up by the individual, or become overtly noticeable in the context of unequivocal failures, or else are expressed in rage attacks, retaliation, and suicidal behaviour (Ronningstam, 2010).

However, empirical research does not clarify whether vulnerable and grandiose narcissism should be conceived as two oscillating sides of the same coin, or as relatively different subtypes (Campbell & Miller, 2011; Di Pierro & Madeddu, 2018). On one hand, there is evidence of fluctuations in grandiose and vulnerable manifestations, especially to the extent that grandiose individuals may show vulnerable aspects in daily life, attending to both informant-ratings and self-reported longitudinal accounts (Edershile & Wright, 2019a; Gore & Widiger, 2016; Hyatt et al., 2017). On the other hand, vulnerable and grandiose narcissistic traits have shown quite different patterns of associations with emotion dysregulation (e.g., Di Pierro, Di Sarno, & Madeddu, 2017), interpersonal dysfunctions (Dickinson & Pincus, 2003; Miller et al., 2011), indices of psychopathology (Miller et al., 2011; Thomas et al., 2012), and even attachment styles and potential etiological factors (e.g., Dickinson & Pincus, 2003; Miller et al., 2017). Also, with regard to personality traits, only grandiose narcissism has shown positive associations with extraversion (Miller, McCain, et al., 2014), whereas vulnerable narcissism is more strongly related to measures of neuroticisim, negative

affectivity, or emotional instability (Fossati et al., 2014; Jakšić et al., 2014; Miller, Dir, et al., 2010; Miller, Gentile, Wilson, & Campbell, 2013; Miller & Maples, 2011; Wright et al., 2013).

Finally, an open question is also whether vulnerable narcissism is *narcissistic* at all, given its similarity with borderline features or general measures of impaired personality functioning (Miller & Maples, 2011; Thomas et al., 2012). Emerging data suggests that what binds together the two manifestations of pathological narcissism is a core theme of antagonism and entitlement (Krizan & Herlache, 2018; Miller et al., 2017), something that is also acknowledge by the AMPD in the *DSM-5* (Criterion B; APA, 2013). Both vulnerable and grandiose narcissism consistently show to be associated with measures of antagonism or low agreeableness (Miller et al., 2013; Miller & Maples, 2011; Paulhus, 2001; Wright et al., 2013), and are characterized by vindictive and domineering interpersonal behaviours (Dickinson & Pincus, 2003; Wright et al., 2017). Moreover, features of grandiose fantasies, entitlement, and contingent self-esteem have been found to have a central role in defining the structure of pathological narcissism (Di Pierro et al., 2019). These findings seem consistent with the idea that even the most dysphoric aspects of vulnerable narcissism (e.g., anxiety, avoidance of relationships, self-esteem instability) are in fact guided by a core of entitled expectations, and by difficulties in managing disappointments and threats to a grandiose self-image (Dickinson & Pincus, 2003; Pincus & Roche, 2011). In this sense, grandiose and vulnerable narcissism would *both* represent specific constructs, rather than mere expressions of general impairments in personality or concurrent borderline traits.

Thus, many questions remain unanswered on the nature and relationship of grandiose and vulnerable narcissism. Still, if a consensus is slowly emerging, then it is certainly organized around the themes of self-esteem regulation on one hand, and antagonism on the other. Pathological narcissism must involve deficits in the regulation of self-esteem, which

appears to be unstable or fragile, and maladaptive strategies embedded with distrust, entitlement, manipulativeness, and lack of attunement with others.

The issue of grandiose and vulnerable narcissism calls for a final, more general consideration: traditionally, the study of these manifestations has been carried out within nonclinical samples, where narcissism is viewed as a continuous construct and no dichotomous decision of a clinical nature is made. It has been argued that research on trait narcissism is an important source of information for understanding pathological narcissism (Miller & Campbell, 2010). Attending to this view, pathological constellations of traits are thought to be distributed in the general population with varying levels, regardless of the presence of a full-blown personality disorder. Accordingly, recently developed measures of grandiose and vulnerable narcissism, such as the Five Factor Narcissism Inventory (FFNI, Glover et al., 2012) and the Pathological Narcissism Inventory (PNI, Pincus et al., 2009) are conceived to detect pathological personality traits in the general population (Pincus & Lukowitsky, 2010). The two measures come from different theoretical backgrounds, as the PNI was built with a focus on clinical manifestations of pathological narcissism, whereas the FFNI considers narcissism as a blend of specific personality traits that were adapted from the Five Factor Model of Personality (e.g., Costa & McCrae, 1992). Hence, the two questionnaires have meaningful differences (Miller, Lynam, & Campbell, 2016; Wright, 2016). Both, however, approach pathological narcissism as a dimensional contruct, consisting of grandiose and vulnerable manifestations, each in turn characterized by a series of specific sub-dimensions. Debate remains on the dimensional *vs* categorical nature of personality pathology, and consequently on the gold standards for research and assessment of PDs and PD features (Hopwood, 2018). However, to date research in nonclinical samples appears to be legitimate and informative for both clinical and subclinical manifestations of pathological narcissism, especially when researchers want to disentangle the role of grandiose and vulnerable traits in leading specific dynamics and associations (Miller et al., 2017).

2.2 Pathological narcissism and shame: theoretical contributions

Literature offers a lot of contributions suggesting that narcissism and shame are intimately related. Three types of contributions on the issue can be basically traced: classic psychodynamic works, models of narcissism emphasizing self-regulatory processes, and empirical studies. Each line of thinking provides complementary information and conceptualizations on the topic, helping build and understand the foundation of the studies that will be presented later in the present work.

The following paragraphs will review the main theoretical contributions to the theme, whereas available empirical findings will be presented in Chapter III, prior to the empirical section of this work.

2.2.1 "Classic" psychodynamic contributions

Since Freud (Freud, 1914), plenty of authors have elaborated the theme of narcissism in psychoanalysis (e.g., Kernberg, 1975; Kohut, 1971; Rosenfeld, 1987), but only a few specifically discussed the role of shame in their works (e.g., Morrison, 1983; Wurmser, 1987). Psychoanalytic thinking generally described shame and narcissism as two sides of the same coin, variably defining shame as the "*veiled companion of narcissism*" (Wurmser, 1987, p. 64), "*the underside of narcissism*" (Morrison, 1989), or "*the keystone affect*" in narcissistic phenomena of the self (Broucek, 1982).

We already mentioned the works of Kohut and his attempts to define shame in metapsychological terms (see Chapter I): Kohut's point of view on narcissism is undoubtedly precious in understanding narcissists' shame sensitivity. In his works (e.g., Kohut, 1972), shame is named in the context of narcissistic injuries and described as one of the main reactions to threats to one's own narcissistic balance: "*shame and rage*" – he stated – are the "*two principal experiential and behavioral manifestations of disturbed narcissistic equilibrium*"

(1972, p. 378). And he went on to say that a "*narcissistically vulnerable individual responds to actual (or anticipated) narcissistic injury either with shamefaced withdrawal (flight) or with narcissistic rage (fight)*" (1972, p. 378). In other words, Kohut connected intense reactions of shame (or rage) to a failure of the grandiose self in achieving "*absolute control in an archaic environment*" (1972, p. 358) as a mean of regulating self-esteem.

Kernberg, on the other hand, did not emphasize as much the role of shame in his early writings on narcissism. As Broucek (1982) suggested, he ignored shame in his contributions, favouring a Klenian emphasis on envy and rage as connected to narcissism and its malignant forms (Kernberg, 1975). Even in his works, however, shadows of shame can be read between the lines. For instance, Kernberg stated that "*the grandiose self permits the denial of dependency on others, protects the individual against narcissistic rage and envy, creates the precondition for ongoing depreciation and devaluation of others*" (Kernberg, 1975, p. 283). What is normal for narcissistically "healthy" individuals – such as certain degrees of dependency on others, feelings of tenderness, affect, and love – can cause shame in narcissistically "unhealthy" individuals (Wurmser, 1981), whose acceptance of their own human qualities is disturbed by the fantasies of self-sufficiency of the grandiose self. In this sense, Kernberg also appears to contemplate the idea that feelings of shame and humiliation can arise as consequences of lost power, perceived weakness, and ultimately failures in grandiose expectations regarding the self[2]. After all, Kernberg acknowledges shame as an important affect emerging in the transference of narcissistic patients, and states that "*shame acquires a particularly important function as an expression of the discrepancy between ideal self and real self* [...] *a discrepancy between the pathological grandiose self and the gradual acceptance of emotional reality, the previously denied, projected, and unacceptable aspects of*

[2] As Bosson suggests (Bosson et al., 2008), both Kernberg's and Kohut's view of narcissism agree on the description of grandiosity as a mask to deep-seated feelings of inferiority, a conception of narcissistic grandiosity that, however controversial, is still very discussed and studied – especially with reference to self-esteem levels, dynamics, and stability – and nowadays falls under the name of the "mask model" of narcissism.

the self geared to protect the totally idealized nature of the pathological grandiose self" (Kernberg, 2015, p. 641).

More specific contributions on narcissism and shame also variably declined the idea that shame emerges when narcissistic defences collapse because of failures of the compensatory grandiose self (Morrison, 1983; Wurmser, 1981) or breaches in omnipotent psychic retreats (Steiner, 1993, 2011). Put it the other way around, "*the tenacity of grandiose defenses protects people from the painful shame feelings that may follow their undoing*" (O'Leary & Wright, 1986, p. 330).

To the extent that shame is the result of a devaluation of the self, and narcissism is a way of regulating the self, the two concepts can be nothing but strictly connected. As Wurmser clarified in one of his works (Wurmser, 1987, p. 76):

> Insofar as "narcissism" refers to the concept of "selfesteem" and "pathological narcissism" to that of "overvaluation" of oneself or of others (something "immoderate", "limitless", "exaggerated", "absolute"), any great discrepancy between self-expectation ("ideal self") and self-perception ("real self") is by definition a "narcissistic conflict", and it is *eo ipso* one that is *felt* as shame ("the complex affect of shame"). In other words, the more ambitious and peremptory (narcissistic) the ego ideal is, the more painful is the wound about failing and the more pervasive is the narcissistic anxiety about yet more mortifications of such nature.

In this sense, shame results from a failure to attain to one's internal standards. When personal standards are integrated in a reasonable ideal self, shame is lower in magnitude and intensity. More grandiose self-expectations, on the other hand, result into more intense and painful discrepancies between ideal and actual self (Morrison, 1983), that – at the experiential level – are felt as shame (Wurmser, 1987). Clearly, grandiose self-expectations can have many diverse and clinically meaningful declinations: among the others, expectations of superiority, of success, of perfection, of admiration, and of complete independence. All these expectations increase the stakes of being seen in one's own "imperfections": omnipotent fantasies of being admired, for instance, may turn out to increase sensitivity to shame if such fantasies are "seen through" (Steiner, 2015, p. 1954). Also, grandiosity encompasses the risk of being seen in

one's own clumsy attempts to build grandiose but shaky regulatory fantasies. Indeed, as suggested by some authors, certain narcissistic individuals may harbour a covert grandiosity and become ashamed of it (Ronningstam, 2005b, 2005a), whenever they are forced to recognize their dependency on self-aggrandizement or other's approval for self-regulation.

Despite more speculative in a way, Broucek's perspective (1982, 1991) adds an interesting developmental point of view to the psychoanalytic study of shame in early narcissistic development. In reviewing previous works (e.g., Izard, 1977; Tomkins, 1963), Broucek (1982) stated that experiences of inefficacy and disapproval may be seen as the earliest releasers of shame. In his opinion, shame represents a typical emotional response to those situations in which "*the infant is disappointed in his excited expectation that certain communicative and interactional behaviour will be forthcoming*" (1982). Activation of affects pertaining to the area of interest, joy, or excitement, and subsequent frustration or inefficacy regarding these affects and related motivations are therefore described as sources of primitive shame and early disturbances of the self. For instance, unexpected disapproval of sexual exhibitionism produces in the child a sudden decrement in excitement and undermines the perception of being in control of the mother/the environment. Broucek therefore emphasized the importance of feeling able to produce an effect that is congruent with one's desires. In this sense, he was not far from Kohut's descriptions of a need for *absolute control* over the environment, nor from what Tronick (1978) would then define as "violation of reciprocity", a caregiver's absent or paradoxical response to the child (see Muscetta, 2013). The sudden decrease of arousal when interest/joy/excitement is frustrated stands at the foundation of primitive shame responses. In a sense, early prototypes of shame appear as a primitive "*awareness of inadequacy*" (Nussbaum, 2004, p. 185), or an "*embodied anxiety regarding the threat of losing the physical bonds of caregivers*" (Dolezal, 2017, p. 434), and may not necessarily require proper self-awareness to be experienced (Dolezal, 2017).

In Broucek's view, the grandiose self is a pathological version of the normal ideal self: the latter is the "precipitate" of memories of efficacy and well-being, whereas the former is the result of compensatory fantastic elaboration of experiences of inefficacy, with omnipotent and magical qualities. The person with a grandiose self strives to eliminate shame, as shame is the enemy of the grandiose self. In this sense, Broucek proposed a bridge between Kohut's and Kernberg's theories of narcissism: he suggested that the more a narcissistic patient embraces the grandiose self and denies the actual/ashamed self, the more narcissism takes the form of self-aggrandizement and self-inflation. On the other hand, when the grandiose self is split off and hidden and the actual depreciated self remains conscious, a more deflated presentation of narcissism emerges, characterized by more explicit experiences of shame. Broucek's contribution allows to speculate on diverse potential conflicts eliciting shame in relation to narcissistic needs: a narcissist may consider dependency on others as shaming; a patient of this kind is more likely to resemble Kernberg's decriptions, harbouring conscious fantasies of self-sufficiency. Another patient may be ashamed due to inability to elicit mirroring responses in the environment, potentially unaware of the underlying grandiose fantasy of being admired in all circumstances: this kind of patient would probably be more similar to Kohut's descriptions of the disorder. Psychodynamic approaches seem to suggest that, in all these situations, individuals are actually dealing with their omnipotence, and shaming frustrations to it: strategies to do so differ with regard to the level of shame that is consciously experienced (Broucek, 1982). Moreover, attending to Broucek (1982), not only shame is a reaction to the failure of the grandiose self: it is also an instigating force in its very construction. Indeed, without primitive shame there would be no need to build a compensatory grandiose structure at all. In this view, shame fuels the grandiose self, and subsequently strengthens the defences that maintain the splitting between grandiose and ashamed experiences of the self.

In other words, it is due to shame that the self finds shelter in grandiosity, and due to failed grandiosity that shame threatens to re-emerge. New defences need to be set in motion either to restore grandiosity (e.g., aggression) or to minimize failures (e.g., withdrawal). In this sense, pathological narcissism resembles a process, or a mixture of potential processes for self-regulation, organized around feelings of unworthiness and shame.

2.2.2 Self and affect regulation in pathological narcissism

Building both on psychoanalytical thinking and recent empirically driven conceptualizations of grandiose and vulnerable narcissism, a few theoretical perspectives have emerged that attempted to describe personality pathology in general, and narcissism more specifically, as the result of maladaptive strategies to regulate the self. These perspectives, either organized in "structured" social-cognitive models or in broader theoretical considerations, are an interesting standpoint from which shame experiences in narcissists can be observed and understood.

Around twenty years ago, Morf and Rohdewalt (2001) proposed an approach that focused on narcissism as a personality process, rather than a static individual trait. The authors viewed narcissists as characterized by extremely positive but fragile self-views and described narcissistic pathology in terms of a constant, repeated constellation of thoughts, feelings, and behaviours aimed at obtaining validation for the grandiose self. The authors, indeed, defined the grandiose self as "*an impossible goal* [...] *perpetually under construction*" (p. 179-180). All the typical manifestations of narcissism – derogation of other's negative feedback, interpersonal exploitation, aggression – were described by Morf and Rohdewalt (2001) as strategies to maintain self-esteem at the highest possible level. Considering successive systematizations of pathological narcissism, we may now say that the authors discussed grandiose manifestations of narcissism, while considering vulnerability as an underlying, hidden theme that the narcissistic individual strives to ignore, deny, and

compensate with multiple efforts. With regard to shame, Morf and Rohdewalt (2001) only mentioned this affect as one of the "paradoxes" of narcissistic functioning, a typical reaction to situations threatening self-esteem. However, in reviewing one of their previous studies (Rhodewalt & Morf, 1998), they suggested that narcissists present distorted attributional processes. In particular, they would tend to ascribe positive outcomes to their internal, stable, and global qualities, without a clear corresponding tendency to externalize negative outcomes and failures (i.e., they take greater credit for success, but may not be likely to attribute failure to external circumstances). This strategy would have the potential to guarantee high gains in terms of self-esteem, as well as high losses when success is not achieved. As described in Chapter I, many authors suggest that shame is the result of internal, stable, and global casual attributions. Even if no explicit reference is made to shame as a consequence of these attributions in Morf and Rhodewalt's work (2001), their self-regulatory model of narcissism seems to offer an interesting point of view on the theme. On one hand, narcissists strive to maintain an unachievable high view of themselves; on the other, their fallacious and risky self-enhancing strategies may paradoxically increase the likelihood of experiences of unworthiness, including feelings of shame.

In a similar fashion, Elsa Ronningstam considers pathological narcissism as a regulatory strategy that involves the functions of internal control, self-esteem and affect regulation, perfectionism, and empathic abilities (e.g., Ronningstam, 2010, 2011, 2014). As Ronningstam suggested (2010), shame is a frequent reaction to perceived threats to self-esteem (Ronningstam, 2011) and, together with self-criticism, it is usually related to maladaptive perfectionism. Indeed, failures to achieve perfection can be intolerable for narcissists: "*feelings of shame can be intrusive, tormenting, and sometimes paralyzing, but they can also be unacknowledged and hidden, bypassed, and not felt and identified at all. Alternatively, they can be expressed as chronic low selfesteem; feeling undeserving, bad, or worthless; or in aggressive behavior, rage outbursts, and suicide*" (Ronningstam, 2011, p. 73). In other words,

failed perfectionism may trigger shame, whereas fear of shame may further motivate perfectionism or induce more dysphoric regulatory strategies (Ronningstam & Baskin-Sommers, 2013).

Another interesting perspective is the one outlined by Schoenleber and Berenbaum (2012). As mentioned in paragraph 1.4, the authors considered shame regulation as a core feature of many personality disorders. Based on direct and indirect evidence, they identified a series of internal and behavioural strategies used to down-regulate feelings of shame. A significant part of the shame-regulating strategies they described in their paper has something to do with pathological narcissism, both with its grandiose and vulnerable manifestations: strategies such as fantasy, perfectionism, self-promoting behaviours, diversion of attention, social withdrawal, and various forms of physical and verbal aggression have been observed in narcissists and are even part of the defining features of pathological narcissism and NPD themselves (e.g., APA, 2013; Glover et al., 2012; Pincus et al., 2009).

In summary, what these models seem to suggest is that shame and grandiosity are interrelated aspects of pathological narcissistic functioning, to the extent that they are linked by what looks like a "double" tie: shame fuels grandiosity as a compensatory strategy, but grandiosity inevitably backfires into heightened sensitivity to potentially shaming situations and experiences. Hence, all these models implicitly or explicitly propose a conception of pathological narcissism where grandiose and vulnerable themes are co-existing sides of the same coin.

For the sake of clarity, Table 2.3 summarizes the main theoretical contributions on narcissism and shame that were reviewed in these paragraphs.

Table 2.3. Summary of the main theoretical contributions on narcissism and shame

Source	Main theoretical background	Main contribution
Kohut (1972)	Self-psychology (Psychoanalysis)	Discusses shame as a reaction to narcissistic injury
Kernberg (1975, 2015)	Klenian and Ego Psychoanalysis	Discusses shame in the transference and in relation to dependency on others. Considers shame the result of a discrepancy between the pathological grandiose self and emotional reality
Wurmser (1981, 1987)	Ego Psychoanalysis	Discusses shame as the product of a conflict between a peremptory (narcissistic) ego ideal and the ego
Morrison (1983)	Self-psychology (Psychoanalysis)	Discusses shame in relation to grandiose aspirations of the ideal self and failures of the real self
Broucek (1982)	Self-psychology (Psychoanalysis)	Discusses primary shame in relation to early experiences of inefficacy and disapproval in the context of interest/joy/excitement. Describes the grandiose self as an omnipotent ideal self that compensates early experiences of shame. Defines subtypes of narcissism based on their conscious *vs* hidden shame
Steiner (1993, 2011, 2015)	Klenian Psychoanalysis	Describes psychic retreats as narcissistic defences against shame/humiliation/embarrassment. Discusses shame in relation to a collapse of narcissistic defences and the exposure of the real self
O'Leary & Wright (1986)	Psychoanalysis	Describe grandiose defences as a protection against shame
Ronningstam (2010, 2011, 2014)	Psychoanalysis Regulatory models	Discusses shame in relation to perfectionism and self-criticism in narcissists. Acknowledges that vulnerable narcissists may become ashamed of their own compensatory grandiosity
Morf & Rhodewalt (2001)	Social-cognitive models	Describe narcissism as characterized by positive but fragile self-views, and constant dynamic attempts to validate the grandiose self. Shame is not thoroughly discussed, but can be traced as one of the paradoxical reactions to self-enhancement failures
Schoenleber & Berenbaum (2012)	Social-cognitive models	Define shame-regulation as a core feature of personality pathology (including narcissism)

CHAPTER III

EMPIRICAL FINDINGS ON NARCISSISTIC SHAME

3.1 A review of previous studies

Empirical findings on the study of shame in narcissism are not exactly inexistent: some studies can be traced back to the ‘80s and ‘90s, and research interest on this topic has remained quite lively even in recent times. In spite of this, empirical studies show somewhat conflicting and incomplete results. This is partly due to inconsistencies in the way narcissism has been conceptualized and assessed over the years, as well as to the limitations in research designs for the investigation of the theme.

Most of the studies have been conducted in nonclinical samples, and can be generally grouped in two main areas: cross-sectional studies, including exploratory and correlational studies, as well as laboratory designs, and intensive longitudinal studies. Intensive longitudinal studies have been implemented only recently. However, they provide interesting findings regarding the topic of this work.

3.1.1 Cross sectional and experimental studies

Many correlational studies have been conducted using the Narcissistic Personality Inventory (NPI, Raskin & Hall, 1979) for the assessment of narcissism, and investigating its associations with self-reported experiences of shame, often operationalized in terms of shame-proneness. The NPI has shown to be negatively (Gramzow & Tangney, 1992; Montebarocci, Surcinelli, Baldaro, Trombini, & Rossi, 2004; Poless, Torstveit, Lugo, Andreassen, & Sütterlin, 2018; Uji, Nagata, & Kitamura, 2012; F. Wright, O’Leary, & Balkin, 1989) or non-significantly associated with shame in community samples (Harder et al., 1992; Harder & Zalma, 1990). However, it is of note that debate persists on the validity and utility of the NPI

(Cain et al., 2008; Miller, McCain, et al., 2014): the measure is at least a controversial one, particularly as it is know to assess a mixture of adaptive and maladaptive traits of grandiose narcissism, while neglecting traits of vulnerable narcissism almost completely (Cain et al., 2008).

More recent evidence from correlational studies suggests that only pathological narcissism may be related to increased predisposition to shame (Hyatt et al., 2017; Pincus et al., 2009; Schoenleber, Roche, Wetzel, Pincus, & Roberts, 2015). This is also consistent with a study by Ritter and colleagues (2014), showing that patients with NPD report higher levels of explicit shame than healthy controls, and higher scores on implicit measures of shame, compared to both healthy controls and patients with Borderline Personality Disorder. In other words, experiences of shame are likely to have a relevant role in both subclinical and clinical manifestations of pathological narcissism, but not in more adaptive forms of narcissism.

More specifically, studies suggest that experiences of shame are more typical of vulnerable pathological narcissism, rather than of grandiose pathological narcissism (Hyatt et al., 2017; Poless et al., 2018; Schoenleber et al., 2015). For instance, feelings of shame have been found to account for increased risk for gambling and alcohol problems in young adults high in vulnerable narcissistic traits, but not in grandiose narcissistic traits (Bilevicius et al., 2019).

Experimental studies support the link between vulnerable expressions of narcissism and shame: for instance, studies show that vulnerable narcissism is associated with increased sensitivity to shame after receiving performance feedback. Malkin, Barry, and Zeigle-Hill (2011) investigated the association between vulnerable narcissism and internalizing responses following performance feedback across three different conditions: positive, neutral, and negative feedback after a quiz. Participants in the positive feedback condition exhibited higher levels of shame if they had high levels of vulnerable narcissism, measured through the

Hypersensitive Narcissism Scale (HSNS, Hendin & Cheek, 1997). This counterintuitive finding was discussed by the authors suggesting that positive feedback may convey implicit demands of continuous performance (Baumeister, Hutton, & Cairns, 1990), and is consistent with studies showing that positive feedback can be shame-inducing for children who have low self-esteem, the so called "praise-paradox" (Brummelman, Thomaes, de Castro, Overbeek, & Bushman, 2014; Brummelman, Crocker, & Bushman, 2016). However, contrasting results have been found by Freis, Brown, Carrol, & Arkin (2015), who found that participants scoring high on the HSNS were actually more likely to experience shame after a *negative* performance feedback, but only when negative feedback disconfirmed their self-reported positive performance ratings. The authors argued that, rather than feedback itself, it is the mismatch between self-perceptions and feedback that leads to increased emotional reactions.

Finally, some studies focused on the reactions to shame-inducing situations, demonstrating that they can trigger aggression towards others in individuals high in grandiose narcissistic traits. For instance, Thomaes, Stegge, & Olthof (2007) assessed children's anticipated responses to prototypically shame-inducing situations, finding that narcissistic traits were associated with a higher tendency towards aggressive responses to such situations. The finding was also confirmed within an experimental paradigm consisting of an ostensible competitive task, as authors demonstrated that children with high narcissistic traits were more aggressive (i.e., more likely to blast their opponent with a noise) after losing the competition, if they had been shamed by the researcher (Thomaes, Bushman, Stegge, & Olthof, 2008).

Overall, cross-sectional studies indicate that subjective experiences of shame are more pronounced in individuals high in pathological rather than adaptive narcissism, and demonstrate the role of vulnerable narcissistic traits in leading this association.

3.1.2 Intensive longitudinal studies

Quite recently, intensive longitudinal research – including diary studies, or ecological momentary assessment – has become increasingly popular for the study of personality pathology (e.g., Jarnecke et al., 2017; Roche, Jacobson, & Pincus, 2016; A. G. C. Wright & Simms, 2016). Experience sampling studies are usually described as an improvement over traditional retrospective methods, as these studies – despite not free from methodological flaws (e.g., sensitivity to response style, see Baird, Lucas, & Donnellan, 2017) – have the ability to assess in-context behaviours and affects, with consequent attenuation of memory and selection bias, and increased introspection on emotional experience (Reis, 2012; Schwarz, 2012).

Several intensive longitudinal studies are now also available on narcissism, including studies on interpersonal perceptions and behaviours (Edershile & Wright, 2019b; Roche, Pincus, Conroy, Hyde, & Ram, 2013; Wright et al., 2017), fluctuations in narcissistic states (Giacomin & Jordan, 2016b, 2016a), and self-esteem stability and reactivity (Geukes et al., 2017; Zeigler-Hill & Besser, 2013; Zeigler-Hill, Myers, & Clark, 2010). Not only these studies allow assessing relevant daily outcomes associated with trait narcissism: they also offer the opportunity to capture variations in *state* narcissism. Indeed, researchers and clinicians suggest that personality has both trait and state components, where personality traits reflect general tendencies of behaviour, cognition and emotion, and personality states represent variations of such tendencies across contexts or situations (e.g., Hopwood, 2018; Zimmermann et al., 2019). Research suggests that narcissism can be described in state terms for a number of reasons. On one hand, it is characterized by several fluctuations, as indicated by variations and instability in the overall levels of grandiosity and vulnerability over time (e.g., Edershile & Wright, 2019a; Giacomin & Jordan, 2016b, 2016a). Also, narcissism tends to change in response to situational cues, as people report for instance higher levels of

narcissism after using social networks (Gentile, Twenge, Freeman, & Campbell, 2012; Horton, Reid, Barber, Miracle, & Green, 2014), as well as less narcissism after being induced to experience empathic concern (Giacomin & Jordan, 2014). Moreover, the idea of a state component in narcissism is also in line with self-regulatory models and clinical theories (Kernberg, 1975; Kohut, 1971; Morf & Rhodewalt, 2001; Ronningstam, 2011) positing that narcissism is characterized by regulatory strategies to maintain high self-esteem (see paragraph 2.2.2), which are dynamic by definition.

No intensive longitudinal study of narcissism investigated shame as its main focus of interest. However, some provided relevant preliminary information for the topic. For instance, some of them focused on the relationship between narcissistic traits and positive *vs* negative affects in general. Giacomin and Jordan (2016a) found that state pathological narcissism was associated with state reports of shame and guilt in a daily diary study with nonclinical participants, meaning that on days when participants experienced higher shame and guilt than usual they also described themselves as more narcissistic, attending to an adjective rating measure of narcissism.

Investigating interpersonal and affective processes in social interactions, Wright and colleagues (2017) found that NPD features in psychiatric outpatients amplified the connection between perception of other's dominance, negative affectivity, and one's own aggressive/quarrelsome behaviour. In other words, individuals with high NPD-related symptoms experienced more negative affects, especially shame feelings, when interacting with others who were perceived as dominant and, in turn, they behaveded in more antagonistic ways. Using an intensive longitudinal design, Edershile and colleagues (2019a) also found that daily grandiose and vulnerable narcissism were both associated with high levels of daily negative affects, including shame.

Of great interest are also diary studies on state self-esteem in narcissistic functioning, as empirical and theoretical works (Velotti et al., 2017; Watson, Hickman, & Morris, 1996) highlight that self-esteem is an important correlate of shame. Zeigler-Hill and colleagues (2010) found that individuals high in NPI trait narcissism showed higher decreases in state self-esteem only after negative achievement events, but not after negative social events. Zeigler-Hill and Besser (2013) also demonstrated that individuals high in traits of pathological vulnerable narcissism, measured by the PNI (Pincus et al., 2009), had steeper increases in state self-esteem in response to positive interpersonal events, whereas findings on NPI trait narcissism were mixed: traits of entitlement/explotativeness were associated with increased sensitivity to negative interpersonal events, leading to severe drops in self-esteem, while individuals high in traits of Leadership/Authority and Grandiose/Exhibitionism showed reduced self-esteem reactivity in response to negative interpersonal events. Using different measures of narcissism, Geukes and colleagues (2017) also found that trait narcissistic rivalry was related to rather low and fragile state self-esteem, especially following social exclusion, whereas narcissistic admiration was related to stable high daily self-esteem.

3.1.3 Conclusions

All the findings reported here are not easy to summarize in a coherent frame. In a general sense, cross-sectional studies suggest heightened reactions to shaming situations in narcissists (Thomaes et al., 2008, 2007), and specific associations between pathological narcissism and increased subjective experiences of shame (Pincus et al., 2009; Ritter et al., 2014; Schoenleber et al., 2015), mostly attributable to the presence of vulnerable narcissistic features (Freis et al., 2015; Malkin et al., 2011).

Studies with longitudinal designs also show that features of pathological narcissism are associated with higher momentary negative affects (Edershile & Wright, 2019a; Wright et al.,

2017). Vulnerable narcissistic traits would be related to more fragile feelings of self-worth, resulting into heightened reactions to interpersonal events (Geukes et al., 2017; Zeigler-Hill & Besser, 2013), whereas certain grandiose traits (especially in their more adaptive variants) might be either protective for self-esteem reactivity, or lead to increased sensitivity to performance-related events only (Zeigler-Hill et al., 2010).

All the findings reviewed until now are informative and important, but a series of questions remain unanswered: previous studies did not offer "definitive" answers on the specific narcissistic traits that may increase or decrease shame-proneness, on the way grandiose and vulnerable narcissists experience shame in daily life, nor on the daily events that are most likely to trigger shame. The reasons for these gaps are of various nature and suggest the importance of further research on the topic.

3.2 Rationale: why do we need further investigation?

The topic this work aims at clarifying, namely the specific relationship between pathological narcissistic traits and experiences of shame, has not yet been addressed in a systematic and satisfactory way. Different research questions, as well as limitations regarding, for instance, the assessment of narcissism or the adopted research procedures, are responsible for this. Clearly, there is no "perfect" method of investigation or study. However, accumulation of data through different methodologies may allow to obtain a clearer understanding of narcissistic shame. Precisely for this reason, it is useful to understand the limitations and gaps of previous studies, as it helps figuring out the reasons why further research is still needed on the topic.

A first set of considerations concerns the relationship between measures of grandiose narcissism and measures of shame. Studies are unclear on this association: after finding no meaningful relationship with the NPI in cross-sectional studies (e.g., Harder et al., 1992;

Harder & Zalma, 1990), researchers mostly focused their attention on vulnerable presentations of narcissism (Freis et al., 2015; Malkin et al., 2011). However, novel studies, especially diary studies, recently hinted at possibly more nuanced associations between grandiose narcissism and negative affects, provided one assesses features of pathological narcissism (e.g., Edershile & Wright, 2019a; Pincus et al., 2009). After all, at the trait level, it is not surprising that individuals scoring high on a dispositional measure of grandiose narcissism – adaptive or pathological – also score low on questionnaires assessing shame-proneness. This is not only due to social desirability issues: it is also related to the fact that "trait" assessments are highly influenced by self-concept and retrospective bias (Trull & Ebner-Priemer, 2009). If narcissistic participants state that they do not "tend to" be ashamed "in general", experiences of shame can actually not be excluded in daily life. Participants may be less likely to describe themselves as prone to shame (i.e., shame-related self-concept), but still experience more shame than non-narcissistic counterparts in day to day life. Indeed, experiences of vulnerability and shame can be easily bypassed and denied in narcissists (Ronningstam, 2010, 2011) and, in a way, the more the assessment of shame becomes generalized, the less a participant high in grandiose narcissism is likely to openly report it.

A few studies prevented these problems by investigating the reactions to typically shaming scenarios and situations, rather than shame itself (e.g., Thomaes et al., 2008, 2007). This ingenious strategy allowed to bypass any reference to explicit shame – or related concepts – almost completely. In a way, though, a design of this kind has a different focus: shame is rather induced or supposed to be elicited by the provoking situation or scenario, but a direct assessment of shame as experienced by the participant is not carried out.

Further considerations relate to experimental designs: experimental studies – such as the ones by Malkin and colleagues (2011) or Freis and colleagues (2015) – are able to inform on the casual relationship between a series of variables. Still, they lack ecological validity by

definition (Trull & Ebner-Priemer, 2009). At the same time, studies using a blend of implicit and explicit measures of shame – such as the study by Ritter and colleagues (2014) – have the great advantage of looking into implicit emotional processing, but the specific role of grandiose and vulnerable narcissistic traits can not be disentangled without using a dimensional trait approach.

As for intensive longitudinal studies, even when they included shame as a variable, they considered it as a unitary construct with guilt (e.g., Giacomin & Jordan, 2016a; Wright et al., 2017), an expression of the general domain of negative affectivity. However, as reported in Chapter I, shame and guilt are different affects with a series of underlying dynamic and cognitive specificities.

Finally, a more general consideration concerns the measures used to assess narcissism throughout the studies. A significant portion of the reviewed findings relied on the use of arguable measures of narcissism, such as the NPI (Raskin & Hall, 1979), whose doubtful adequacy has already been discussed (e.g., Cain et al., 2008). More recent measures such as the FFNI (Glover et al., 2012) and the PNI (Pincus et al., 2009) attracted attention in the last years, as they are more in line with the latest conceptualizations of pathological narcissism. It is recognized, however, that these self-reports capture different aspects of the construct: while being both capable of capturing vulnerable themes, the PNI is more adequate in capturing covert facets of grandiose narcissism, whereas the FFNI is more suitable to measure overtly grandiose manifestations of narcissism, resembling a more DSM-based conception of pathological narcissism (Miller, Lynam, & Campbell, 2016; Wright, 2016). Hence, even when using such recent measures, researchers may find it difficult to generalize their findings and bump into non-homogeneous results.

As shown, empirical studies demonstrate that feelings of shame are associated with increased maladaptive behaviours in narcissists, both in terms of aggression towards others

and self-endangering behaviours (e.g., Bilevicius et al., 2019; Thomaes et al., 2008). Together with clinical observations and models, these findings highlight how relevant shame regulation can be in terms of maladaptive interpersonal and symptomatic outcomes, and sustain the importance of empirical and clinical investigations of the theme.

The set of studies presented in this work was precisely conceived building on these findings, as well as on their "blind spots", in an attempt to further produce psychoanalytically inspired and empirically driven knowledge around the broad theme of shame in narcissistic functioning.

3.3 Moving through the empirical section

The general aim and *fil rouge* of this empirical section is to offer a thorough view of the specific theme of narcissism and shame. The studies adopt both a dispositional conceptualization of shame and narcissism, as well as a more dynamic, state perspective inspired by experience sampling research. The empirical section is organized in three studies, based on two data collections.

Study 1 can be thought of as a way to set the foundations for the subsequent studies. Indeed, the study presents the psychometric properties of the Italian version of the Personal Feelings Questionnaire-2 (PFQ-2, Harder & Zalma, 1990), a measure for the assessment of shame- and guilt-proneness. Originally developed in the US in the '90s, but still used in recent research (Averill et al., 2002; Rüsch, Corrigan, et al., 2007), the PFQ-2 had a number of characteristics that made it in line with the aims and research project of this work. For instance, it is a brief measure, mostly based on adjectives, conceived to assess shame- and guilt-proneness (i.e., the tendency to experience shame or guilt), but also suitable for the assessment of state shame in experience sampling research (Turner, 2014). However versatile, this measure of shame- and guilt-proneness had never been validated in an Italian sample.

Study 1 addresses a series of methodological and conceptual questions regarding shame- and guilt-proneness, such as the distinction between the two constructs (i.e., the ability of the PFQ-2 to detect this difference), gender differences in experiencing shame and guilt (i.e., the gender invariance of the questionnaire), and the clinical correlates of both affects (i.e., discriminant and converget validity, and clinical utility of the PFQ-2).

Study 2 is based on the same data from Study 1. However, it reports additional analyses that were performed on extra measures included in data collection. For the sake of clarity, and given the different research question, these analyses are presented in a consecutive chapter and discussed as a separate study. The investigation is a first exploration of the associations between narcissism and shame-proneness in a cross-sectional design. The study serves as a first step toward in-depth analysis of the relationships between traits of pathological narcissism and shame-proneness: the focus is on disentangling the role of specific narcissistic traits, as well as the unique associations with shame-proneness regardless of the concurrent levels of guilt-proneness, stemming from the idea that shame and guilt are not the same thing and may not have the same relevance for narcissistic functioning.

Study 3 is the core of the present work: it presents data from an intensive longitudinal study with a daily diary design, carried out with undergraduate students, with the aim of investigating the association of daily shame with pathological narcissism, both in its trait/dispositional component and in its state components (i.e., state grandiose and state vulnerable narcissism). The study also aims at analyzing the mechanisms and triggers (i.e., situations) that modulate manifestations of pathological narcissistic traits in daily life, inspired by the idea that this kind of studies help detecting behavioural and emotional dynamics that are of more direct interest for clinicians (Hopwood, 2018; Hopwood, Zimmermann, Pincus, & Krueger, 2015; Roche et al., 2016). Indeed, personality (and its pathology) can be conceptualized as a recurrent pattern of dynamic processes involving within-person sequences

of thoughts, feelings, motives and behaviours that change across time, sustaining more stable (between-person) individuals differences (Hopwood, 2018). Hence, the study stems from the idea that focusing on within-person dynamics represents an additional value to the study of personality pathology, and will allow, with time and accumulation of data, to include within-person dynamics as a part of our clinical descriptions and diagnostic features of personality pathology. Dynamics associated with shame are, in particular, the focus of this study.

The presentation of each study is preceded by a brief overview, where literature discussed in the first two chapters is recalled when useful and the main hypotheses are outlined. Each study is also followed by a discussion of its findings, whereas a final and general discussion is included at the end of the dissertation.

CHAPTER IV

STUDY 1: ASSESSING SHAME- AND GUILT-PRONENESS IN AN ITALIAN SAMPLE[1]

4.1 Overview

Different self-report measures of shame- and guilt-proneness are currently available (for a review, see Robins, Noftle, & Tracy, 2007). These include measures based on diverse assessment procedures, such as scenario-based measures (e.g., The Test of Self-Conscious Affect-3, TOSCA-3, Tangney, Dearing, Wagner, & Gramzow, 2000) or statement-based questionnaires, including the Guilt Inventory (GI, Kugler & Jones, 1992)(GI; Kugler and Jones 1992) and the Experience of Shame Scale (ESS, Andrews et al., 2002).

The Personal Feelings Questionnaire-2 (PFQ-2, Harder & Zalma, 1990) is a measure of shame- and guilt-proneness based on a series of adjectives or short statements refferring to experiences that are related to shame and guilt. The measure has shown good psychometric properties in US samples (Harder et al., 1992; Harder & Greenwald, 1999; Harder, Rockart, & Cutler, 1993) and, compared to other measures (e.g, the GI), it is brief and easy to administer. Also, there is evidence that its items are more "neutral" with regard to gender and possibly cultural bias compared to scenario-based measures such as the TOSCA-3: for example, scenario-based questionnaires tend to report situations that are more likely to elicit shame or guilt in women than in men (Else-Quest, Higgins, Allison, & Morton, 2012; Ferguson & Eyre, 2000; Ferguson, Eyre, & Ashbaker, 2000). Importantly, PFQ-2 guilt-proneness scale also captures maladaptive and ruminative aspects of guilt, when compared to other measures (Ferguson & Crowley, 1997; Harder, 1995; Rüsch, Corrigan, et al., 2007),

[1] This chapter is based on a paper, currently proposed for publication as:
Di Sarno, M., Di Pierro, R., & Madeddu, F. (under review). Shame- and guilt-proneness in an Italian sample: Latent structure and gender invariance of the Personal Feelings Questionnaire-2 (PFQ-2). *Current Psychology*.

making the PFQ-2 a particularly suitable questionnaire for research in clinical psychology. Indeed, empirical studies in nonclinical samples have shown that both PFQ-2 scales correlate with aspects of maladaptive adjustment: shame-proneness positively correlates with general psychopathology (Harder et al., 1992), depression and self-derogation (Harder et al., 1992; Harder & Zalma, 1990), or social and trait anxiety (Harder et al., 1993; Rüsch, Corrigan, et al., 2007), whereas it negatively correlates with self-efficacy (Rüsch, Corrigan, et al., 2007) and traits of agreeableness (Harder & Greenwald, 1999). Both PFQ-2 scales have shown positive correlations with the domain of neuroticism (Harder & Greenwald, 1999), and PFQ-2 guilt-proneness has also shown to be positively related to psychopathological symptoms such as anxiety (Harder et al., 1992) and depression (Harder & Zalma, 1990).

The aim of Study 1 is to investigate how this existing measure of shame- and guilt-proneness performs in an Italian community sample and to test for a distinction of shame- and maladaptive guilt-proneness in nonclinical populations. As reviewed in paragraph 1.3.1, shame and guilt are shaped by social norms to a greater extent than basic emotions. Differences can depend on the centrality of individualistic *vs* collectivistic values, and can impact the way people experience shame and guilt, the effect these emotions have on psychopathological *vs* more adaptive outcomes, the lexical expressions used to describe the two affects, and even individuals' ability to distinguish shame from guilt (Bedford & Hwang, 2003; Edelstein & Shaver, 2007; Fessler, 2007; Fischer et al., 1999; Goetz & Keltner, 2007; Wallbott & Scherer, 1995). The distinction between collectivistic and individualistic cultures, moreover, is hardly ever sharp (Bedford & Hwang, 2003), and a country such as Italy is highly heterogeneous in this regard, close to the American individualistic culture on one hand, but still assigning a central role to family and collectivistic values on the other (Santarelli & Cottone, 2009; Shulruf et al., 2011). For these reasons, it is important that research on shame- and guilt-proneness relies on the use of measures that have been validated appropriately in

their context of usage, as no direct correspondence can be given for granted across different cultures in terms of latent structure, indicators, and correlates of the constructs.

Hence, the study has three more specific aims: (1) testing the factor structure of the PFQ-2 through Confirmatory Factor Analysis (CFA); (2) examining the gender invariance of the factor structure; (3) examining the external correlates of shame- and guilt-proneness using measures of psychopathology and a recently developed inventory of maladaptive personality traits.

Regarding points (1) and (2), it is important to note that previous studies only investigated the factor structure of the PFQ-2 through exploratory approaches (Harder & Zalma, 1990); moreover, no study ever examined its gender-invariance, despite widespread interest in gender effects in the assessment of shame- and guilt-proneness. Indeed, literature has always paid attention to gender differences in self-conscious emotions, traditionally describing women as more prone to shame and guilt than men (Lewis, 1971b, 1978; O'Leary & Wright, 1986), with recent meta-analytical findings providing general support to this idea, but suggesting a more nuanced picture (Else-Quest et al., 2012). It is open to debate whether women's tendency to score higher on measures of shame- and guilt-proneness stems from innate predispositions, from gender role socialization, or as a consequence of assessment procedures (Ferguson & Eyre, 2000; Herring, 2018): findings indicate – for instance – that gender differences are more evident in white compared to non-white samples (Else-Quest et al., 2012), whereas researchers argue that differences may depend on the unbalanced *expression* (rather than actual *experience*) of such emotions across men and women (Else-Quest et al., 2012; Ferguson & Eyre, 2000).

In fact, besides mean differences in their ratings, little is known on the way shame and guilt are subjectively experienced and represented across genders (Ferguson & Eyre, 2000). Only recently, studies (Watson, Gomez, & Gullone, 2017) have demonstrated the gender

invariance of the latent structure of measures of shame- and guilt-proneness, such as the TOSCA-A (Tangney, Wagner, Gavlas, & Gramzow, 1991), as well as similar patterns of correlations in men and women between measures of shame and psychopathological symptoms (Velotti et al., 2017). This is somewhat curious, as gender invariance is a methodological pre-requisite for the investigation of gender differences (Watson et al., 2017), because it suggests that the latent structure works equally across genders and, as a consequence, differences in the scores can be reliaby interpreted as a sign of differences in the corresponding latent constructs. In a more conceptual sense, these analyses also inform on the way the constructs are represented in two different groups, as in the case of potential differences in item loadings suggesting uneven indicators across genders for the latent constructs (Chen, 2008; Watson et al., 2017).

Hence, the study attempts to fill gap in research conducted with the PFQ-2, and to improve the assessment of shame- and guilt-proneness in italian samples; also, it aims at contributing to our understanding of the two affects, their clinical correlates and their distinction.

4.2 Hypotheses

Despite evidence of an overlap between the perception of shame and guilt in most western cultures (e.g., Edelstein & Shaver, 2007; Fessler, 2007), data were expected to support a two-factor solution for the PFQ-2 (Harder & Zalma, 1990). This expectation is in line with theoretical descriptions of the two affects (Lewis, 1971b; Tracy & Robins, 2007) and with previous studies exploring the correlates of shame- and guilt-proneness in Italian samples using other measures (i.e., Anolli & Pascucci, 2005). Moreover, both scales were expected to be associated with indices of negative affectivity, but also to show differential patterns of correlations with other external measures, supporting their existence as two

different constructs. In this sense, the two scales were expected to show different magnitudes of correlations with criterion measures of shame- and guilt-proneness, in a manner consistent with the construct each scale intends to assess. Also, based on previous studies (Harder & Greenwald, 1999) and theoretical considerations (Schoenleber & Berenbaum, 2012), it was hypothesized that shame-proneness would show stronger associations with the maladaptive personality trait of interpersonal detachment. Also, both scales were expected to be associated with psychopathological symptoms (e.g., Harder et al., 1992), despite depression, anxiety, and general psychopathology were expected to be more strongly associated with shame- than with guilt-proneness (Cavalera et al., 2017; Harder & Greenwald, 1999) due to the pervasiveness of shame compared to guilt feelings (Lewis, 1971a; Tracy & Robins, 2007).

4.3 Methods

4.3.1 Participants and procedure

The sample consisted of 367 Italian participants (M_{age} = 33.67, SD = 13.62, age-range = 18-74), taken from the general population. The majority of participants were women (N = 259), and one participant did not specify gender. Around 70% of participants were unmarried (N = 258), whereas 84 participants (22.9%) were married or living with a partner, 21 were separated or divorced (5.7%), and 3 were widowed (0.8%). Around 65% of the sample (N = 236) had a graduate level of education or above, whereas 127 participants (35.1%) had a high school level of education or below.

Participants were involved in the study through posting on social networks. Participation was completely voluntary and informed consent was obtained from each participant included in the study, which was approved by the Ethical Committee of the University of Milan-Biccca. Participants did not receive any incentive (e.g., money or credits) to participate.

After completing an online survey, participants were asked to voluntarily provide their e-mail address for a re-test of the Personal Feelings Questionnaire-2. One hundred and fifty five of them supplied their e-mail address: among them, 81 subjects (25 males, 56 females; M_{age} = 31.43, SD = 11.32, age-range = 21-64) completed the re-test after two-months.

4.3.2 Measures of shame- and guilt-proneness

Personal Feelings Questionnaire-2 (PFQ-2, Harder & Zalma, 1990). The PFQ-2 is a 22-item self-report measure assessing both shame-proneness and guilt-proneness. Participants are asked to rate how often they experience the feeling described in each item using a 5-point Likert scale (0 = you never experience the feeling; 4 = you experience the feeling continuously or almost continuously). In the English version, 10 items load onto the factor of shame-proneness (e.g., 'embarrassment', 'feeling ridiculous'), whereas 6 items load onto a guilt-proneness factor (e.g., 'regret', 'intense guilt'). Shame- and guilt-proneness scores are obtained by summing the items of the two scales. The questionnaire also includes 6 filler items, excluded from the scoring procedure. The PFQ-2 was translated into Italian through a back-translation procedure, after getting permission from the original author. The author of the present dissertation translated the questionnaire into Italian; then, a second researcher, blind to the original English version, translated the Italian draft back into English. Discrepancies in the two English versions were then discussed, until the translators reached consent on a final Italian version. The Italian translation of the PFQ-2 is fully presented in Appendix A.

Guilt Inventory (GI, Kugler & Jones, 1992). The GI is a 45-item self-report measure designed to assess maladaptive guilt. The questionnaire assesses three guilt-related constructs: state guilt, trait guilt, and moral standards. Participants are asked to state their level of agreement with each item, using a 5-point Likert scale (1 = completely disagree/totally false;

5 = completely agree/very true). For the purpose of this study, only the trait guilt scale was considered (19 items), obtained by summing the items of the scale after adapting reverse ones. The GI has already been used in Italian samples (e.g., Basile, Mancini, Macaluso, Caltagirone, & Bozzali, 2014). Cronbach's alpha for trait guilt was .87 in the current study.

Experience of Shame Scale (ESS, Andrews et al., 2002). The ESS is a 25-item self-report measure assessing shame-proneness in terms of characterological, behavioral, and bodily shame. Participants are asked to rate how often they experienced shame feelings in the last year, using a 4-point Likert scale (1 = not at all; 4 = very much). In the present study, only the shame character scale was used, which showed good internal consistency (α = .90). The ESS has already been used in Italian research (Caretti, Craparo, & Schimmenti, 2010; Velotti et al., 2017).

4.3.3 Measures of psychopathology and pathological personality

Symptom Check List-90-Revised (SCL-90-R, Derogatis, 1994; Italian version in Prunas, Sarno, Preti, Madeddu, & Perugini, 2012). The SCL-90-R is a 90-item self-report measure assessing severity of psychopathological symptoms in the last seven days. Participants are asked to report symptom-related distress, using a 5-point Likert scale (0 = not at all; 4 = extremely). The SCL-90-R assesses symptoms of somatization (12 items), obsessive-compulsivity (10 items), interpersonal sensitivity (9 items), depression (13 items), anxiety (10 items), hostility (6 items), phobic anxiety (7 items), paranoid ideation (6 items), and psychoticism (10 items), as well as other disturbances in appetite and sleep (7 items). Finally, the measure allows to compute a total score capturing general symptom-related distress (Global Severity Index, GSI), obtained by averaging the scales. In the present sample, Cronbach's alphas for the 9 main subscales ranged from .77 to .89, whereas Cronbach's alpha for the 'other' subscale (i.e., appetite and sleep) was .68, and for the GSI was .94.

Personality Inventory for the DSM-5 – Brief Form (PID-5-BF, Krueger, Derringer, Markon, Watson, & Skodol, 2013; Italian version in Fossati, Somma, Borroni, Markon, & Krueger, 2017). The PID-5-BF is a 25-item self-report screening measure designed to assess the five broad domains of pathological personality traits proposed in the alternative model for the diagnosis of personality disorders in the DSM-5 (APA, 2013): negative affectivity, detachment, antagonism, disinhibition, and psychoticism. Items are rated on a 4-point Likert scale (0 = very false or often false; 3 = Very true or often true) and domain scores are computed by averaging the items. In line with previous studies (e.g., Anderson, Sellbom, & Salekin, 2018), internal consistency estimates for the PID-5 scales were adequate in the current sample (range .63 - .78).

4.3.4 Statistical analyses

All statistical analyses were performed using the software R-Studio 1.1.463 (RStudio Team, 2016) and R version 3.5.2 (R Core Team, 2018, R codes are available in Appendix B).

CFA was conducted (package "lavaan", Rosseel, 2012) to examine whether a two-factor structure with non-orthogonal factors fitted the data. Due to deviations from multivariate normality, indices were based on a robust maximum likelihood estimation (Finney & Di Stefano, 2013; Satorra & Bentler, 1994); latent factors were standardized to allow free estimation of all factor loadings. Model fit was assessed using the robust *Satorra-Bentler Chi-square statistic* (χ^2_{SB}) and complementary fit indexes (Bollen, 1989; Hu & Bentler, 1999), including the Comparative Fit Index (*CFI*), the Tucker-Lewis Index (*TLI*), the Root Mean Square Error of Approximation (*RMSEA*), and the Standardized Root Mean-square Residual (*SRMR*). Given controversies regarding cutoffs for acceptable model fit (Hopwood & Donnellan, 2010; Hu & Bentler, 1999; Marsh, Hau, & Wen, 2004), we referred to the following criteria: *CFI* > .90, *TLI* > .90, *RMSEA* < .08, and *SRMR* < .06.

Due to overlaps of shame- and guilt-proneness (e.g., Averill et al., 2002), a one-factor model was also tested, where all items loaded onto a unique factor. Models were then compared through *Akaike* (*AIC*) and *Bayesian Information Criteria* (*BIC*), used to compare fit of nested models: the lower their value, the more parsimonious and accurate the model (Akaike, 1981; Schwarz, 1978).

Measurement invariance across genders was evaluated through the package "lavaan" and the package "semTools" (Pornprasertmanit, Miller, Schoemann, & Rosseel, 2014)[2]. Testing of measurement invariance is performed by comparing models defined by progressively more stringent equality constraints (Byrne, 2009). First, a model implying the same factor structure for the two groups is set and its fit investigated (configural invariance); then, a new model implying equal magnitude of factor loadings across groups is set and compared with the first model to establish metric invariance. In the following passages, item intercepts (strong invariance) and residual variances (strict invariance) are respectively constrained to be equal across genders (Hirschfeld & von Brachel, 2014). Invariance is confirmed if the fit of more constrained models is not substantially worse than the fit of more liberal ones: a non-significant $\Delta\chi^2$ (Byrne, Shavelson, & Muthén, 1989) and a ΔCFI lower than .01 (Hirschfeld & von Brachel, 2014) suggest invariance. Since the χ^2 is sensitive to sample size and violations from normality, however, the ΔCFI criterion is usually regarded as more reliable (Chen, 2007; Cheung & Rensvold, 2002).

Further analyses included zero-order and partial correlations with external measures (package "psych", Revelle, 2018) for the investigation of discriminant and convergent validity: the PFQ-2 scales were partialled with each other to obtain "pure" correlations independent of the shared variance between shame- and guilt-proneness (Averill et al., 2002; Harder et al., 1992; Harder & Greenwald, 1999; Harder et al., 1993; Rüsch, Corrigan, et al.,

[2] Due to missing information about gender, one participant was excluded from this analysis.

2007). *T*-tests for paired correlation coefficients were then performed in order to investigate whether correlations with external measures were significantly different for shame- and guilt-proneness (Chen & Popovich, 2002). Finally, test-retest reliability of the PFQ-2 scales was evaluated with single-measurement, absolute agreement, two-way mixed effects *Intraclass Correlation Coefficients* (*ICC*, Shrout & Fleiss, 1979; Weir, 2005).

4.4 Results

4.4.1 Factor Structure of the PFQ-2

According to Harder and Zalma (1990), we initially set a model (Model 1) in which items 2, 4, 8, 11, 17 and 22 loaded onto a guilt-proneness factor, whereas items 1, 3, 6, 7, 10, 12, 14, 16, 18, and 21 loaded onto a shame-proneness factor. Results showed that fit for Model 1 was to the limit of acceptance ($\chi^2_{SB}(103) = 293.30$; $p < .001$; *CFI* = .85; *TLI* = .83; *RMSEA* = .08; *SRMR* = .07).

We therefore inspected modification indices, as they specify how model fit improves after freeing certain parameters (Kaplan, 1989). Modification indices were sorted with respect to their impact on model fit: according to the analysis, we freed the covariance between three couples of items which loaded onto the same latent factor: 11(‘regret’) - 22(‘remorse’), and 2(‘mild guilt’) - 8(‘intense guilt’), loading on the guilt-proneness factor, as well as 3(‘feeling ridiculous’) - 14(‘feeling helpless/paralyzed’), loading on the shame-proneness factor. This allowed the model to consider additional common variance between each couple, meaning that the covariance between those items could not be entirely explained by the hypothesized latent variable. The similarity of item content for each couple also provides a conceptual basis for the additional shared variance and therefore for the inclusion of the three modification indices. By adding these parameters, the new two-factor model (Model 2) showed good fit to the data ($\chi^2_{SB}(100) = 191.19$; $p < .001$; *CFI* = .93; *TLI* = .92; *RMSEA* = .05; *SRMR* = .05).

As for the two factor solution, we tested a model (Model 3) where all items loaded onto a unique factor. Results showed that fit for this model was not acceptable ($\chi^2_{SB}(104) = 385.83$; $p < .001$; *CFI* = .78; *TLI* = .75; *RMSEA* = .09; *SRMR* = .07), hence we explored modification indices. Similarly to the two-factor solution, modification indices suggested additional covariance could be expected in the item couples 2-8, 11-22, and 3-14. Robust *TLI* for the new one-factor model (Model 4) was to the limit of acceptance ($\chi^2_{SB}(101) = 222.11$; $p < .001$; *CFI* = .90; *TLI* = .89; *RMSEA* = .06; *SRMR* = .06). Comparison between Model 2 (modified two-factor) and Model 4 (modified one-factor) through *AIC* and *BIC* showed that the two-factor model was more parsimonious and fitted data significantly better than the one-factor solution (see Table 4.1).

Table 4.1. Comparison between two-factor (Model 2) and one-factor model (Model 4).

Model	***AIC***	***BIC***	χ^2 **(gl)**	$\Delta\chi^2_a$
Model 2	14118	14258	227.10 (100)	
Model 4	14152	14288	263.12 (101)	41.83*

*p < .001; $_a$Satorra-Bentler χ^2 difference test. *AIC* = Akaike information criterion; *BIC* = Bayesian information criterion; χ^2 = chi-square fit statistic; $\Delta\chi^2$ = change in chi-square

The two-factor solution demonstrated invariance across genders at the configural and metric level (details are presented in Table 4.2). Strong invariance was only accomplished after allowing items 16 (‘feelings of blushing’) and 10 (‘feeling stupid’) to have different intercepts in the two subgroups, as suggested by the exploration of modification indices (Hirschfeld & von Brachel, 2014). This allowed the model to consider that different intercepts in the two items were not entirely due to gender differences in the hypothesized latent construct of shame-proneness. Also, acceptable strict invariance was found, as suggested by the Δ*CFI* index. Overall, results indicate that Model 2 was the best model describing our data, suggesting that the Italian version of the PFQ-2 is composed by two scales: the shame- and

the guilt-proneness scale. Results also indicate that this structure replicates fairly well across genders.

Table 4.2. Measurement invariance across genders

Invariance	χ^2	df	*RMSEA*	*CFI*	$\Delta\chi^2_a$	Δdf	Δ*CFI*
Configural	329.16	200	0.05	.936	-	-	-
Metric	343.06	214	0.05	.937	12.82	14	.001
Strong	357.82	226	0.05	.934	17.01	12	.003
Strict	379.84	242	0.05	.926	33.34*	16	.008

Note. N_{males} = 107; $N_{females}$ = 259; *p < .001; $_a$Satorra-Bentler χ^2 difference test. Items 16 and 10 were allowed to have different intercepts across genders. [a]Satorra-Bentler χ^2 difference test. Configural = invariance of factor structure; Metric = invariance of structure and loadings; Strong = Invariance of structure, loadings, and intercepts; Strict = Invariance of structure, loadings, intercepts, and residuals; χ^2 = chi-square fit statistic; df = degrees of freedom; *RMSEA* = root mean squared error of approximation; *CFI* = comparative fit index; $\Delta\chi^2$ = change in chi-square; Δdf = change in degrees of freedom; Δ*CFI* = changes in comparative fit index.

Table 4.3 shows the standardized factor loadings of the items attending to Model 2 and allows visual comparison with the factor loadings of the Principal Component Analysis reported in Harder and Zalma's original validation study (1990). The two scales were positively correlated in the present sample (r = .54, p < .001), and showed acceptable to good internal consistency (shame: α = .82, guilt: α = .71). Results also showed that both shame- and guilt-proneness had moderate test-retest reliability after two months (shame: *ICC* = .70; guilt: *ICC* = .69).

4.4.2 Descriptive statistics of the two-factor solution

The mean score for PFQ-2 shame was 13.21 (*SD* = 5.79), whereas the mean score for PFQ-2 guilt was 10.07 (*SD* = 3.53). Given the different number of items for each scale, the total scores of guilt and shame were divided by the number of contributing items to allow direct comparison of means. A one-sample *T*-test showed that participants reported on

average higher guilt-proneness (M = 1.68, SD = .59) than shame-proneness (M = 1.32, SD = .58; $t(362)$ = -11.73, p < .001).

Two T-tests for independent samples were conducted to investigate gender differences in shame- and guilt-proneness. Overall, women reported higher shame-proneness (M = 14.11, SD = 5.80) than men (M = 11.02, SD = 5.18; $t(360)$ = -4.75, p < .001). Gender differences in shame-proneness remained significant when items 16 and 10 – differing across genders in terms of intercept – where excluded from the computation of the scale score ($t(360)$ = -3.49, p < .001). Similarly, women reported on average higher guilt-proneness (M = 10.35, SD = 3.46) than men (M = 9.40, SD = 3.66; $t(362)$ = -2.35, p < .05).

Table 4.3. Standardized factor loadings for the two-factor model (Model 2) and original factor loadings from Harder & Zalma (1990).

Items	**PFQ-2 Guilt**		**PFQ-2 Shame**	
	CFA	Harder & Zalma	CFA	Harder & Zalma
2: *Mild guilt*	.56	.61	-	
4: *Worry about hurting or injuring someone*	.55	.69	-	
8: *Intense guilt*	.59	.75	-	
11: *Regret*	.33	.54	-	
17: *Feeling you deserve criticism for what you did*	.55	.54	-	
22: *Remorse*	.46	.47	-	
1: *Embarrassment*	-		.59	.49
3: *Feeling ridiculous*	-		.69	.62
6: *Self-consciousness*	-		.63	< .40
7: *Feeling humiliated*	-		.65	< .40
10: *Feeling "stupid"*	-		.60	.68
12: *Feeling "childish"*	-		.36	.72
14: *Feeling helpless, paralyzed*	-		.54	.55
16: *Feelings of blushing*	-		.38	.41
18: *Feeling laughable*	-		.75	.76
21: *Feeling disgusting to others*	-		.51	.58

Note. Factor Loadings from Harder and Zalma are obtained through Principal Component Factor Analysis: for the full secondary loadigns see Harder and Zalma (1990).

Age negatively correlated with shame-proneness (r = -.25, p < .001), indicating that younger participants were more likely to report high shame scores. Conversely, guilt-proneness was not significantly correlated with age (r = -.07, p = .20).

4.4.3 Discriminant and convergent validity of the PFQ-2

Table 4.4 shows both zero order and partial correlations of the two PFQ-2 scales with external measures. Correlations were computed including only participants without missing values (N = 357). After the partialization, both guilt- and shame-proneness scales showed consistent associations with criterion measures. For instance, PFQ-2 shame positively correlated with the external measure of shame (ESS), and this correlation coefficient was significantly higher than the one between PFQ-2 guilt and the ESS score. Similarly, PFQ-2 guilt was positively correlated with the external measures of trait guilt (GI), and this correlation coefficient was significantly higher than the one between PFQ-2 shame and the GI trait score. PFQ-2 shame and PFQ-2 guilt were both significantly correlated to a similar extent with the PID-5 domain of negative affectivity, whereas they differed in terms of detachment and disinhibition. Finally, both PFQ-2 shame and guilt were significantly correlated with several SCL-90-R dimensions, but most of the correlation coefficients were significantly higher for shame- than for guilt-proneness.

4.5 Discussion

Overall, findings from Study 1 support the distinction between shame- and guilt-proneness and the validity of the PFQ-2 for the assessment of both constructs. Results indicate that the questionnaire is able to assess shame- and guilt-proneness in both men and women, as shown by configural and metric invariance. This finding also provides important information regarding shame and guilt, as it suggests that their nature and their indicators are

equally interpretable across genders. In other words, despite *quantitative* differences in expressing self-conscious emotions (e.g., Else-Quest et al., 2012), there may be no substantial *qualitative* difference in the way men and women experience and think about these two dysphoric affects.

Table 4.4. Zero order and partial correlations of PFQ-2 scales with external measures and differences between shame- and guilt-proneness.

	PFQ-2 Shame		**PFQ-2 Guilt**		t_d
	r	r_p	r	r_p	*t*
ESS					
Shame Character	.56***	.40***	.48***	.25***	3.20***
GI					
Trait Guilt	.46***	.22***	.60***	.45***	-5.03***
PID-5-BF					
Negative Affect	.42***	.27***	.39***	.22***	1.02
Detachment	.29***	.21***	.21***	.07	2.81**
Antagonism	.03	.00	.08	.07	-1.38
Disinhibition	.09	.00	.15**	.13*	-2.58*
Psychoticism	.26***	.14*	.28***	.16***	-0.40
SCL-90-R					
Somatization	.35***	.25***	.27***	.11*	2.83***
Obsessive-compulsive	.45***	.31***	.39***	.19***	2.47*
Interpersonal	.56***	.46***	.38***	.11*	7.84***
Depression	.48***	.35***	.39***	.18***	3.55***
Anxiety	.38***	.26***	.32***	.15***	2.23*
Hostility	.29***	.19***	.25***	.12*	1.40
Phobic Anxiety	.35***	.28***	.22***	.04	4.95***
Paranoid Ideation	.39***	.28***	.30***	.12*	3.27***
Psychoticism	.44***	.28***	.42***	.24***	0.82
Other	.32***	.17***	.35***	.23***	-1.21
Global Severity Index	.50***	.36***	.41***	.19***	3.56***

Note. r_p = partial correlation; t_d = Student's *t* testing the difference between partial correlates of PFQ-2 scales.
N = 357
*p < .05; **p < .01; ***p < .001

As shown by strong invariance, the Italian version of the PFQ-2 was also good at detecting gender-based differences in the mean levels of guilt-proneness, and reasonably good at doing so for shame-proneness: despite items 10 and 16 showed to have different intercepts across genders, gender differences in shame did not change when such items were excluded from the score computation. Moreover, gender differences in both shame- and guilt-proneness were in line with previous studies on trait measures of shame and guilt (Else-Quest et al., 2012). Women had a systematic tendency to score higher on items 16 and 10, regardless of their level of shame-proneness: following Else-Quest et al. (2012), we may hypothesize that cultural norms stereotyping women as more emotional than men could be the reason for an additional gender difference on such items. This may be something to bear in mind when investigating self-reports on the somatic correlates of shame ('feelings of blushing') or on deep feelings of inadequacy ('feeling stupid'), as a tendency to score higher for women may not necessarily mirror higher levels of shame-proneness. Gender invariance was also acceptable at the strict level: findings were not as straightforward, but generally indicated no substantial decrease in fit throughout the more constrained models. After all, it has been previously noted that highly constrained models, such as the ones including invariance of residuals, hardly achieve perfect fit in practice (Van Den Schoot, Schmidt, De Beuckelaer, Lek, & Zondervan-Zwijnenburg, 2015).

In line with previous international findings in nonclinical samples (Harder et al., 1992; Harder & Greenwald, 1999; Harder & Zalma, 1990; Rüsch, Corrigan, et al., 2007), the two PFQ-2 scales showed to be moderately correlated with each other (r = .54). However, this did not seem to have an impact on the possibility to discriminate between shame and guilt: using the parzialization method suggested by Harder et al. (1992, 1993), we found that the PFQ-2 allowed to detect differences in the two constructs. Indeed, each PFQ-2 scale correlated with its corresponding external measure of shame or guilt to a greater extent than the other PFQ-2

scale. Sensible patterns of associations of shame- and guilt-proneness were also found with the PID-5 domains. Negative affectivity was equally correlated with both PFQ-2 scales, in line with previous studies with measures of neuroticism (Harder & Greenwald, 1999). Conversely, shame-proneness was more strongly correlated with detachment than guilt-proneness: as expected, shame is typically related to hiding behaviors and withdrawal (Keltner & Buswell, 1996; Tracy & Robins, 2004). Shame- and guilt-proneness also significantly differed in their association with disinhibition, as only guilt-proneness was slighly but significantly related to such maladaptive personality trait: disinhibition (i.e., "*orientation toward immediate gratification, leading to impulsive behavior*", APA, 2013, p. 780) may actually be the source of feelings of remorse, pertaining to the experience of guilt rather than shame.

Findings showed that both guilt- and shame-proneness were significantly associated with psychopathological distress (SCL-90-R). These results confirm that the PFQ-2 assesses maladaptive aspects of guilt-proneness (Ferguson & Crowley, 1997; Harder, 1995; Rüsch, Corrigan, et al., 2007). At the same time, results suggest that shame-proneness is more strongly associated with indices of psychopathology, consistently with previous studies in nonclinical samples using either the PFQ-2 (Harder et al., 1992; Harder & Greenwald, 1999) and other measures of shame- and guilt-proneness (Orth, Berking, & Burkhardt, 2006; Tangney et al., 1992). In any case, results indicate pervasive associations between psychopathology and both guilt- and shame-proneness, rather than unique correlational patterns. This possibly implies that both shame and guilt can be associated with psychological distress: personality traits may be more relevant than psychological symptoms for

discriminating between shame- and guilt-prone individuals (i.e., more specific associations emerged with regard to the PID-5 domains)[3].

Overall, the present study also highlighted a few concerns regarding the PFQ-2. First of all, results showed that the two-factor CFA model did not fit data without the inclusion of additional parameters. Some authors have previously noted that personality/trait measures often perform poorly when their structure is tested through CFA, given their inherent complexity (Hopwood & Donnellan, 2010). Also, the additional parameters were theoretically meaningful, as each item-couple involved had a very similar content, and did not require to allow for cross-factor secondary loadings. The additional covariance found in the three couples of items mentioned above may nevertheless indicate redundancy in the content of certain items included in the measure. For instance, the items 'regret' and 'remorse', despite having a different meaning both in English and Italian, may be easily confused. Even more, items such as 'mild guilt' and 'intense guilt' may not be necessarily discriminating between different shades of emotional experience.

A few items – including item 11 ('regret') of the guilt-proneness factor and items 12 ('feeling childish') and 16 ('feelings of blushing') of the shame-proneness factor – had relatively low loadings onto the factor they belonged to. *Feelings of blushing* may be associated with milder and less painful affects than shame (indeed, a similar factor loading emerged in the PCA in Harder & Zalma, 1990). On the other hand, it is possible that the relatively low factor loadings for items 11 and 12 in this study are due to translational or

[3] Note that recent findings using the PFQ-2 in a US (Averill et al., 2002) and in a European (Rüsch, Corrigan, et al., 2007) *clinical* sample, where the correlation between the two scales was found to be higher than in community samples, indicated the opposite trend (i.e., unique associations were found between SCL-90-R scales and PFQ-2 guilt, rather than PFQ-2 shame). It has been suggested that individuals in groups that are generally not well educated (i.e., inpatient psychiatric samples) may find it more difficult to discriminate between shame- and guilt-proneness, resulting in higher discriminant validity problems (Averill et al., 2002). Level of education in our sample was indeed high on average. It remains unclear, however, whether the PFQ-2 correlates could be different in clinical samples and, in a more general sense, whether specific features of symptom-related distress could actually be more typical of shame-prone *vs* guilt-prone individuals.

cultural issues. For instance, the adjective *childish* may be perceived as less offensive and shaming in the Italian culture, whereas the term *regret* may be rather associated to the idea of something beyond repair, which is not necessarily in line with the sense of agency implied in the internal attributions on which guilt is based (Miceli & Castelfranchi, 2018; Tracy & Robins, 2004).

In spite of these *caveat*s, the present study did not highlight major problems in the validity of the Italian version of the PFQ-2. In the future, it would be advisable to replicate these findings to test the new modified model in a second sample. Despite large, the current sample also had a wide age range – but with an underrepresentation of older age participants – and was relatively unbalanced in terms of gender. This may have particularly affected robustness of gender-invariance analyses and may limit generalizability of the findings. Finally, cultural and translational issues could be better understood when specifically testing for invariance across cultures, using data from different countries simultaneously.

In conclusion, the present study can be considered as a first and valid effort in validating the Italian version of the PFQ-2, with both conceptual and methodological implications. On one hand, it reinforces the idea of a distinction between shame- and guilt-proneness (even in its maladaptive variant), in men as well as in women. On the other hand, aligning to previous findings, it suggests that the Italian version of the PFQ-2 is still a valid and feasible assessment tool for the maladaptive correlates of shame- and guilt-proneness and for their accurate differentiation. By supporting the idea that specific dynamics and consequences of shame- or guilt-proneness may exist in terms of clinical and personality correlates, the present work implies that researchers should always consider the possibility of disentangling the two emotions. Indeed, investigations of the emotional correlates of personality traits have sometimes tended to collapse shame and guilt together (e.g., Giacomin & Jordan, 2016a; Wright et al., 2017), as expressions of general negative affectivity (Watson

& Clark, 1999), a choice that may be more or less suitable depending on the specificity of the research questions. Finally, from a clinical point of view, understanding shame- and guilt-proneness in patients can be an interesting standpoint to observe and reflect on their personality tendencies and traits, and to explore the extent to which patients' distress is more related to their perceived *harmfulness* (i.e., guilt-proneness) or their perceived *inadequacy* (i.e., shame-proneness) (Miceli & Castelfranchi, 2018).

CHAPTER V

STUDY 2: DIGGING INTO THE NARCISSISM-SHAME ASSOCIATIONS

5.1 Overview

As explained in Chapter II, pathological narcissism encloses both grandiose and vulnerable themes under a core dysfunction of self-regulation. At the trait level, the two manifestations share entitled and antagonistic features, but differ with regard to a series of correlates such as negative affectivity, or high hostility towards others (Glover et al., 2012; Miller et al., 2011; Miller, Lynam, McCain, et al., 2016; Pincus et al., 2009). In particular, the propensity to consciously experience shame may be one of the features that qualify the prevalent narcissistic manifestation: conscious experiences of shame can be expected in vulnerable narcissists, whereas shame denial and avoidance would be rather typical of grandiose narcissists (Broucek, 1982).

As mentioned, empirical evidence also suggests that shame is positively related to the clinical and subclinical manifestations of pathological narcissism (Ritter et al., 2014; Watson et al., 1996). On the contrary, feeelings of shame are negatively (Gramzow & Tangney, 1992; Montebarocci et al., 2004; Poless et al., 2018; Uji et al., 2012; Wright et al., 1989) or non significantly related (Harder et al., 1992; Harder & Zalma, 1990) to measures of more adaptive forms of narcissism (i.e., the NPI).

However, studies based on newly developed measures of pathological narcissism (e.g., PNI, FFNI) only provide preliminary findings on the topic: both grandiose and vulnerable traits of pathological narcissism have shown positive correlations with shame, with some evidence that vulnerable traits have stronger associations with it (Bilevicius et al., 2019; Hyatt et al., 2017; Pincus et al., 2009; Schoenleber et al., 2015). At least two issues may require further investigation. First of all, different measures of pathological narcissism – such as the

PNI and the FFNI – do not assess totally comparable constructs, especially regarding grandiose narcissism (see Chapter III). In fact, the FFNI likely assesses overt aspects of grandiose manifestations related to antagonistic and extroverted tendencies, while the PNI mainly measures covert facets of grandiose narcissism (the only facet that clearly mirrors overt grandiose manifestations is exploitativeness) (Miller, Lynam, & Campbell, 2016; Wright, 2016). In this sense, a simultaneous investigation of the relationship between shame-proneness and both measures of narcissism would provide more generalizable findings on the topic.

Secondly, pathological narcissism is a heterogeneous construct (Glover et al., 2012) and it can be expressed with extreme variability (Caligor, Levy, & Yeomans, 2015): empirical research has sometimes relied on facet-level investigations for a better understanding of the psychological correlates of pathological narcissism (e.g., Dawood, Schroder, Donnellan, & Pincus, 2018). With reference to the present work, it is unclear which facets of grandiose and vulnerable pathological narcissism account for unique associations with shame-proneness, and whether grandiose and vulnerable traits respectively work in synergy in relating to this specific outcome.

Thus, with the general aim of clarifying the relationship between pathological narcissistic traits and the conscious propensity to experience shame (self-reported shame-proneness), the present study has the following intent: (1) investigating the unique associations of grandiose and vulnerable narcissism with shame-proneness, both with the Brief PNI and the FFNI-Short Form; (2) Performing facet-level analyses in order to explore the unique role of specific facets of pathological narcissism. Building on Study 1, the study also focuses on the specificity of shame- relative to guilt- proneness, thus controlling for the shared variance between the two.

5.2 Hypotheses

According to empirical literature, it was hypothesized that shame-proneness would be positively associated with vulnerable narcissism (e.g., Freis et al., 2015; Malkin et al., 2011), as assessed by both measures. On the other hand, FFNI grandiose narcissism was expected to be negatively related to shame-proneness to a greater extent than PNI-based grandiose narcissism, given the higher overlap of the latter with measures of negative affectivity (e.g., Fossati et al., 2018; Miller, Lynam, & Campbell, 2016).

Hypotheses at the facet level were more tentative, due to the lack of previous findings: facets such as exhibitionism, grandiose fantasies, as well as indifference, were expected to be negatively associated with shame-proneness, as such traits should foster shame avoidance and promote a sense of superiority in response to internal and external threats to the self. Facets of vulnerable narcissism, such as contingency of self-esteem, tendency to hide one's needs, need for admiration, as well as of course the tendency to react with self-consciousness in response to criticism, were expected to be associated with increased shame-proneness.

5.3 Methods

5.3.1 Participants and Procedure

As stated in Chapter III, the study was conducted using data from Study 1 and provides additional analyses focused on the specific topic of narcissism and shame. Hence, the sample consisted of 367 Italian participants with a mean age of 33.67 (SD = 13.62, age-range = 18-74; women = 259). Detailed demographics and procedure are displayed in paragraph 4.3.1.

5.3.2 Measures

In addition to the measures presented in paragraphs 4.3.2 and 4.3.3 (including the PFQ-2), participants had also completed the following measures:

Brief Pathological Narcissism Inventory (B-PNI, Schoenleber et al., 2015). The B-PNI is a 28-item short version of the Pathological Narcissism Inventory (Pincus et al., 2009; Italian version in Fossati et al., 2015). The B-PNI assesses 7 dimensions of narcissism, tapping onto the two higher order factors of grandiose narcissism and vulnerable narcissism. Grandiose narcissism (GN) includes three dimensions – grandiose fantasy, exploitativeness, and self-sacrificing self-enhancement – whereas vulnerable narcissism (VN) includes dimensions of contingent self-esteem, entitlement rage, devaluing, and hiding the self. Participants are asked to rate their level of agreement with each statement, using a 6-point Likert scale (0 = not at all like me; 5 = very much like me). Both higher order scales showed good internal consistency in this samples (GN: $\alpha = .84$; VN: $\alpha = .89$), and Cronbach's alphas for facet-scales ranged from .70 to .85.

Five-Factor Narcissism Inventory – Short Form (FFNI-SF, Sherman et al., 2015; Italian version in Fossati et al., 2018). The FFNI-SF is a 60-item short version of the FFNI (Glover et al., 2012), assessing both grandiose and vulnerable narcissistic manifestations. Items are rated on a 5-point Likert scale ranging from 1 ("disagree strongly") to 5 ("agree strongly"). The grandiose narcissism scale includes facets of indifference, exhibitionism, authoritativeness, thrill seeking, grandiose fantasies, manipulativeness, exploitativeness, entitlement, lack of empathy and arrogance. The vulnerable narcissism scale includes facets of cynicism/distrust, need for admiration, shame[1] and reactive anger. Similarly to previous studies (Fossati et al., 2018), Cronbach's alphas in the current study were .91 for grandiose narcissism and .81 for vulnerable narcissism, and ranged from .59 to .84 for the lower order scales.

[1] The shame scale of the FFNI-SF was *not* excluded from our analyses for two main reasons. First, items of the FFNI-SF are written in order to emphasize narcissistic variants of general personality traits: the shame scale of this measure does not assess a general predisposition to shame, but a more specific tendency to feel shame "*in response to rebuke, failure, criticism, or slights*" (Glover et al., 2012, p. 503). In this sense, the scale does not directly overlap with the shame-proneness concept assessed by the PFQ-2. Secondly, given our aim of analyzing data at the facet level, analyses would anyway offer the chance to disentangle the unique effect of each scale.

5.3.3 Statistical Analyses

Analyses were performed though the software R-Studio 1.1.463 (RStudio Team, 2016), using R version 3.5.2 (R Core Team, 2018, main R codes are available in Appendix C). Package "psych" (Revelle, 2018) was used to compute Spearman zero-order correlations. Multiple linear regressions were conducted to address the research goal: Models 1 and 2 investigated unique associations of the higher order grandiose and vulnerable narcissism scales with shame-proneness, using the FFNI-SF and the B-PNI respectively; similarly, Models 3 and 4 tested the specific associations of grandiose and vulnerable facets with shame-proneness. Based on findings from Study 1, all models controlled for age, gender, and guilt-proneness. All variables (except gender and age) were square-root transformed prior to testing the final regression models, after checking for normality of residuals and other assumptions through the package "gvlma" (Pena & Slate, 2019). Exploration of variance inflation factors (package "car", Fox & Weisberg, 2019) suggested no multicollinearity problems.

Sensitivity power analyses (Faul, Erdfelder, Lang, & Buchner, 2007; Perugini, Gallucci, & Costantini, 2018) were also conducted for each regression model using G*Power 3.1.9.4 (Faul, Erdfelder, Buchner, & Lang, 2009), in order to identify the minimum effect size that could be reliably detected, given the number of predictors (5, 5, 18 and 10 respectively), the sample size (N = 367), an alpha value of .05, and a power of .80. These analyses indicated that the minimum detectable effect sizes in the models (Model 1 and 2: f2 = .03; Model 3: f2 = .06; Model 4: f2 = .04) were low-to-medium (Cohen, 1988), suggesting good power.

5.4 Results

Spearman zero-order correlations between FFNI-SF and B-PNI higher-order scales, and PFQ-2 scales are presented in Table 5.1. As shown, shame-proneness was positively

correlated with vulnerable narcissism (both B-PNI and FFNI-SF), but it was also slightly positively correlated with B-PNI grandiose narcissism. At the facet level, shame-proneness was strongly correlated with some FFNI-SF scales, such as need for admiration (r = .51, p < .001), indifference (r = -.29, p < .001), authoritativeness (r = -.27, p < .001), and distrust (r = .20, p < .001), as well as with B-PNI scales such as contingent self-esteem (r = .55, p < .001), devaluing (r = .41, p < .001), hiding the self (r = .34, p < .001), and even grandiose fantasy (r = .24, p < .001).

Table 5.1. Spearman zero-order correlations between shame-proneness and higher order scales of pathological narcissism.

	FFNI-VN	FFNI-GN	BPNI-VN	BPNI-GN	PFQ-S	PFQ-G
FFNI-VN	-					
FFNI-GN	.23***	-				
BPNI-VN	.73***	.32***	-			
BPNI-GN	.41***	.57***	.56***	-		
PFQ-S	.47***	-.08	.47***	.15**	-	
PFQ-G	.37***	-.08	.29***	.16**	.53***	-
Age	-.23***	-.13*	-.35***	-.34***	-.27***	-.08

Note. FFNI-VN = FFNI vulnerable narcissism; FFNI-GN = FFNI grandiose narcissism; BPNI-VN = B-PNI vulnerable narcissism; BPNI-GN = B-PNI grandiose narcissism; PFQ-S = PFQ shame-proneness; PFQ-G = PFQ guilt-proneness. *p < .05; **p < .01; ***p < .001

Multiple regression analyses including the higher-order scales of both measures (Model 1 and Model 2) are presented in Table 5.2. Both models explained a significant percentage of variance in shame-proneness, as expressed by the R^2 values. Grandiose narcissism scales had negative unique association with shame-proneness: contrary to expectations, the two measures yielded very similar results in this regard. On the other hand, vulnerable narcissism was positively related to shame-proneness, again in a similar fashion with both measures.

Hence, the higher grandiose narcissism, the lower participants were prone to experiencing shame, whereas the higher vulnerable narcissism, the more participants reported experiencing shame frequently. All the covariates were also significantly associated with shame-proneness, either positively (i.e., gender – indicating higher scores for women – and guilt-proneness), or negatively (i.e., age).

Table 5.2. Higher-order analyses with FFNI-SF and B-PNI.

	Model 1 - FFNI-SF[1] R^2 = .46, F(5,346) = 58.02**			**Model 2 - B-PNI**[2] R^2 = .48, F(5,355) = 66.68**		
	β	*SE*	*t*	*β*	*SE*	*t*
Gender	0.10	0.04	2.22*	0.16	0.04	4.04**
Age	-0.20	0.04	-4.64**	-0.16	0.04	-3.72**
PFQ-G	0.39	0.04	8.93**	0.41	0.04	10.15**
GN	-0.15	0.04	-3.36**	-0.20	0.05	-4.10**
VN	0.31	0.05	6.69**	0.42	0.05	8.27**

Note. Dependent variable = PFQ shame-proneness; VN = vulnerable narcissism; GN = grandiose narcissism; PFQ-G = PFQ guilt-proneness. *β* = Standardized estimate. *SE* = Standard Error; *p < .05; **p < .001

[1] The model was tested measuring grandiose and vulnerable narcissism through the Brief Pathological Narcissism Inventory (B-PNI).

[2] The model was tested measuring grandiose and vulnerable narcissism through the Brief Pathological Narcissism Inventory (B-PNI).

Table 5.3 shows results from facet-level multiple regression analyses. As can be seen in Model 3, only FFNI-SF authoritativeness and grandiose fantasies had unique associations with shame-proneness in the domain of grandiose narcissism, but in opposite directions: authoritativeness was associated with reduced shame-proneness, whereas grandiose fantasies were associated with *higher* scores on the PFQ-2 scale. As for vulnerable narcissistic facets of the FFNI-SF, they were all positively related to shame-proneness, except for the facet of reactive anger, showing a negative unique association with it.

Table 5.3. Facet-level analyses with FFNI-SF and B-PNI

	Model 3 - FFNI-SF[1] R^2 = .53, F(10,350) = 4.03**				**Model 4 – B-PNI**[2] R^2 = .53, F(18,333) = 20.77**		
	β	*SE*	*t*		*β*	*SE*	*t*
Gender	0.13	0.04	3.00**	**Gender**	0.16	0.04	4.35**
Age	-0.16	0.04	-3.64**	**Age**	-0.12	0.04	-3.00***
PFQ-G	0.35	0.04	7.81**	**PFQ-G**	0.36	0.04	8.81**
AS	0.01	0.06	0.25	**CSE**	0.31	0.05	6.13**
Arr	0.09	0.05	1.68	**ER**	-0.03	0.05	-0.50
Aut	-0.18	0.05	-3.22**	**DEV**	0.12	0.05	2.35*
Ent	-0.01	0.05	-0.22	**HS**	0.09	0.04	1.96
Exh	-0.01	0.05	-0.21	**EXP**	-0.11	0.04	-2.53*
Exp	-0.04	0.05	-0.73	**GF**	0.07	0.05	1.49
GF	0.10	0.05	2.11*	**SSSE**	-0.14	0.05	-2.97**
Ind	0.00	0.05	-0.01				
Emp	0.02	0.05	0.52				
Man	-0.05	0.05	-0.98				
TS	0.01	0.04	0.17				
RA	-0.12	0.05	-2.43*				
Dist	0.12	0.04	2.79*				
NA	0.13	0.06	2.31*				
Sh	0.24	0.06	4.21**				

Note. Dependent variable = PFQ shame-proneness.
FFNI-SF scales: AS = Attention Seeking; Arr = Arrogance; Aut = Authoritativeness; En = Entitlement; Exp = Exploitativeness; Exh = Exhibitionism; GF = Grandiose Fantasies; Ind = Indifference; Emp = Lack of Empathy; Man = Manipulativeness; TS = Thrill Seeking; RA = Reactive Anger; Dist = Cynicism/distrust; NA = Need for Admiration; Sh = Shame;.
B-PNI scales: CSE = Contingent self-esteem; ER = Entitlement rage; DEV = Devaluing; HS = Hiding the self; EXP = Exploitativeness; GF = Grandiose fantasy; SSSE = Self-sacrificing self-enhancement.
SE = Standard Error. *p < .05; **p < .001
[1] The model was tested measuring grandiose and vulnerable narcissism through the Brief Pathological Narcissism Inventory (B-PNI).
[2] The model was tested measuring grandiose and vulnerable narcissism through the Brief Pathological Narcissism Inventory (B-PNI).

Analyses with the B-PNI revealed that grandiose facets of exploitativeness and self-sacrificing self-enhancement were negatively associated with shame-proneness, meaning that the higher tendencies to exploit others or to use altruistic acts to support an inflated self-image, the lower individuals described themselves as prone to shame. As for vulnerable facets, contingent self-esteem and devaluing were positively related to shame-proneness, whereas entitlement rage and hiding the self did not have significant unique associations with it (note that the effect of hiding the self was actually to the limit of significance, $p = .05$). That is, the more self-esteem was fragile and the more individuals tended to devalue those who do not provide admiration, the more prone to shame they were likely to be.

5.5 Discussion

This exploratory study suggests that considering both grandiose and vulnerable narcissism, their specific facets, as well as different operationalizations of the constructs, can clarify the associations between pathological narcissism and shame-proneness.

In a general sense, people high in grandiose narcissism were found to be less prone to experiencing shame, whereas people high in vulnerable narcissism described themselves as more prone to it, regardless of their gender, age, and level of guilt-proneness. This finding appears to be quite robust in the present study, as it was replicated both when using the B-PNI and the FFNI-SF. Moreover, the finding also mirrors previous studies using the NPI for measuring grandiose narcissism (Gramzow & Tangney, 1992; Montebarocci et al., 2004; Poless et al., 2018; Uji et al., 2012; Wright et al., 1989), as well as the HSNS as a measures of vulnerable narcissism (Freis et al., 2015; Malkin et al., 2011). Results also corroborate the more general idea that trait vulnerable narcissism is related to negative affectivity or emotional problems to a greater extent than the grandiose counterpart (e.g., Di Pierro et al., 2017; Miller et al., 2010, 2011).

A more nuanced picture emerges with facet-level analyses. Regarding vulnerable narcissism, findings using the FFNI-SF suggest that the association with shame-proneness is mostly due to traits of excessive need for admiration, distrust towards others, and self-consciousness in response to criticism. The B-PNI further suggests that fragile self-esteem, devaluation of others, and – marginally – the unwillingness to show flaws and needs to others, contribute to higher shame-proneness.

In general, intense needs for others' approval make individuals dependent on external feedback for self-regulation (Freis et al., 2015; Pincus et al., 2009). When such needs are conscious, they can be a source of shame for narcissists, who may be concurrently boasting or longing for independence from other's praise. Also, excessive need for admiration can be a reason for heightened sensitivity to failures, criticism, and loss of approval, that in turn elicit experiences of shame. This result may also help understand findings from clinical samples showing higher explicit and implicit shame in NPD patients (Ritter et al., 2014): despite being biased towards grandiose themes, NPD diagnosis includes features of excessive need for admiration among its criteria, which may be leading factors in increasing propensity to shame.

It can be further discussed that this high dependence on others' admiration, combined with low trust towards the very source of external feedback (high distrust, as well as the tendency to devalue or avoid non-mirroring others), creates a constellation of personality traits that is particularly in line with proneness to shame. As stated by Morf and Rhodewalt (2001), "*narcissists must continuously 'ask' others whether they hold admiring opinions of the narcissists. [...] However, not only are narcissists mistrusting of others due to their early negative experiences, they also do not really like or care for them and often even disdain them"* (p. 179). Even if they do not shed light on the casual or temporal links between these

trait variables, the present results seem to suggest that it is exactly somewhere in between this mess and paradox that narcissists may experience more shame than others.

Of note, the tendency to respond with anger to unmet entitled expectation (B-PNI entitlement rage) was not associated with shame, despite loading onto the vulnerable narcissism factor; similarly, the vulnerable facet of FFNI-SF reactive anger – assessing the tendency to react with hostility to perceived criticism or failure – was indeed negatively linked to shame-proneness. This finding is in line with the idea that aggressive behaviours may help regulate feelings of shame in narcissists by converting them into angry manifestations (Bushman & Baumeister, 1998; Schoenleber & Berenbaum, 2012; Thomaes et al., 2008, 2007), in the attempt to restore a sense of power as opposed to feelings of helplessness. The more one tends to get angry, the less one may consciously feel shame.

As for grandiose facets of narcissism, we found that the negative association with shame-proneness was mostly due to facets of authoritativeness (FFNI-SF), as well as overt or covert exploitative tendencies in interpersonal relationship (i.e., B-PNI exploitativeness and self serving altruism). Regarding FFNI-SF authoritativeness, this facet has been previously linked to measures possibly assessing adaptive narcissism (Glover et al., 2012). Indeed, a similar scale (Leadership/Authority) is also included in the NPI, and it is generally linked to adaptive outcomes (Ackerman et al., 2011). Individuals describing themselves as exploitative and prone to self-serving altruism, on the other hand, may maintain a positive self-image based on power, reducing their propensity to experience shame.

Contrary to expectations, not only we found no evidence that exhibitionism or indifference reduced individuals' explicit shame-proneness: grandiose fantasies were even positively related to shame-proneness, when considering the FFNI-SF. This is somewhat curious, considering that FFNI-based grandiose narcissism is not expected to correlate with negative affectivity, especially when compared to the B-PNI corresponding scale (Miller,

Lynam, & Campbell, 2016; Wright, 2016). The FFNI-SF scale of grandiose fantasies assesses overt fantasies of success and fame (e.g., 'I daydream about someday becoming famous'): it appears that the more grandiose the fantasies, the higher proneness to shame. What is of particular interest, given the cross-sectional design of the present study, is that both grandiose fantasies and shame may inhabit the mind of individuals high in narcissism simultaneously: participants described themselves as prone to shame and prone to grandiose fantasies at the same time. This result does not support the view that grandiose fantasies protect narcissists from experiencing feelings of shame (Schoenleber & Berenbaum, 2012), at least not effectively. Grandiose fantasies may really function as excessive self-expectations (e.g., Morrison, 1983, 1989; Wurmser, 1987), that inevitably encompass self-critical aspects with the potential to induce experiences of shame; alternatively, individuals may recognize the compensatory nature of their grandiose fantasies and be ashamed of them (Ronningstam, 2005b); a third possibility is that those who are more prone to shame also tend to compensate their inner fragility with more grandiose fantasizing. All these options may be possible according to clinical theories, suggesting a complex relationship between the two constructs.

Clearly, results of this study are limited by the use of self-report measures, their administration within a community sample, and the cross-sectional design. Findings can only apply to explicit shame-proneness, and may have limited generalizability (e.g., to clinical populations). Moreover, social desirability and distortions in self-presentation may widen the gap between actual experiences of shame (even if conscious) and self-reported shame-proneness.

In spite of its limitations, the present study globally clarifies previous empirical findings, and provides in-depth analyses regarding the associations of grandiose and vulnerable facets of pathological narcissism with shame-proneness. In particular, findings provide general evidence that grandiose traits are associated with lower, whereas vulnerable

traits with higher, proneness to shame. On the other hand, the study suggests that this relationship can vary from person to person depending on the presence of specific narcissistic traits. Grandiose aspects related to power (i.e., authoritativeness, exploitativeness, self-sacrificing self-enhancement) are particularly responsible for a reduced frequency of shame experiences, whereas vulnerable aspects of fragility, dependency on others, and low trust (i.e., devaluing, contingent self-esteem, distrust, need for admiration, self-consciousness) enhance the predisposition to shame. At the same time, shame experiences appear to be more frequent in individuals who fantasize more about power and success, and lower on those who respond with hostility to criticism and failure.

Study 3 will further investigate these associations within a more dynamic and longitudinal framework, and with additional controlling variables, in order to address the specificity of daily experiences of shame in narcissistic functioning.

CHAPTER VI

STUDY 3: A DAILY DIARY INVESTIGATION[1]

6.1 Overview

The general aim of the present study was to further examine whether grandiose and vulnerable narcissism are associated with shame in a sample of young adults, with specific reference to daily self-reported experiences of shame. Hence, the study aimed at clarifying shame-dynamics in narcissism, considering the role of state and trait pathological narcissism, and identifying situations that are likely to trigger shame responses in narcissistic functioning.

The study built on the idea that shame is a *keystone affect* in narcissism (Broucek, 1982), as the two share common psychological grounds. Digging into this theme required, on one hand, to test whether experiences of shame were linked to pathological narcissistic traits above and beyond potential confounds expressing general impairments in affect- and self-regulation: that is, if shame is a narcissism-specific experience. Additionally, the study also considered narcissism from multiple perspectives in order to obtain the broadest possible view over the theme.

The present work included different measures of pathological narcissism: as in Study 2, and based on previous suggestions (Miller, Lynam, & Campbell, 2016; Miller et al., 2017), trait grandiose and vulnerable narcissism were measured both through the B-PNI and the FFNI-SF. Moreover, in addition to Study 2, narcissism was measured both at the trait level and as a momentary state in an intensive longitudinal design, as recently done in previous studies (Edershile & Wright, 2019b, 2019a). Indeed, discrepancies exist both between

[1] This chapter is based on a paper, currently proposed for publication as:
Di Sarno, M., Zimmermann, J., Madeddu, F., Casini, E., & Di Pierro, R. (under review). Shame behind the corner: A daily diary investigation of pathological narcissism. *Journal of Research in Personality*.

different trait measures of narcissism (Miller, Lynam, & Campbell, 2016; Wright, 2016), as well as between real-time state and retrospective trait-like assessments (Trull & Ebner-Priemer, 2009).

Regarding the specificity of the associations between narcissism and experiences of shame, it is known that many personality disorders are characterized by heightened experience of negative affects (Jarnecke et al., 2017). Vulnerable narcissism correlates highly with measures of neuroticism and negative affectivity (e.g., Miller et al., 2010), to the point of being associated to a rather unspecific form of general personality impairment (see Chapter II, paragraph 2.1.2), despite connected to core narcissistic motives (Wright, 2016). Thinking about shame, vulnerable narcissism is therefore expected to be positively associated with it, albeit those associations may reflect general affect dysregulation rather than narcissism-specific dynamics. Also, cross-sectional studies demonstrated that low self-esteem is an important correlate of shame, and that controlling for self-esteem in statistical models usually reduces the magnitude of the associations between narcissism and shame (Watson et al., 1996). Hence, rather than controlling for guilt-proneness as in Study 2, the present study considered the broader concepts of self-esteem and negative affectivity, and controlled for such confounds when investigating experiences of shame related to narcissism. In doing so, the study attempted to yield highly specific results on the daily experiences of shame that are related to pathological narcissism.

6.2 Hypotheses

It was hypothesized that both trait grandiose and vulnerable narcissism would be uniquely and positively related to daily experiences of shame: indeed, cross-sectional studies suggest that dispositionally grandiose narcissists also exhibit features of vulnerable narcissism (e.g., Gore & Widiger, 2016; Hyatt et al., 2017), and both dispositionally grandiose and

dispositionally vulnerable individuals have been found to manifest high levels of state vulnerable narcissism over time in intensive longitudinal studies (Edershile & Wright, 2019a). Nonetheless, PNI grandiose narcissism was expected to show stronger associations with shame, compared to FFNI grandiose narcissism. Similarly, both state grandiose and vulnerable narcissism were expected to show unique positive associations with daily experiences of shame. Indeed, preliminary findings suggest that state pathological narcissism may be associated with negative affects, including shame (Edershile et al., 2019; Giacomin & Jordan, 2016a).

Specific circumstances (i.e., daily situations) were also thought to exacerbate (or buffer) shame responses in narcissists, by moderating the effect of narcissism (trait and state) on daily shame. Previous studies assessing daily life situations do not offer specific information in this regard, but suggest heightened reactions to social events (positive and negative) for individuals high in pathological narcissism, especially in rather vulnerable traits (Geukes et al., 2017; Zeigler-Hill & Besser, 2013), as well as increased self-esteem reactivity to performance-related events for those who are high in traits of grandiose narcissism (Zeigler-Hill et al., 2010). Based on this, excessive work load was expected to increase high grandiose narcissists' experiences of shame, whereas socially stressful events to mostly increase high vulnerable narcissists' experiences of shame. As for positive events, it was hypothesized that they would protect high narcissists from experiencing shame, especially high vulnerable narcissists.

6.3 Methods

6.3.1 Participants and procedure

Participants were involved in the study through word of mouth and posting on an online-platform of the Department of Psychology. The study was presented as an

investigation of personality in daily life, without reference to shame nor narcissism. Participants were required to be between 18 and 28 years old, and to have an Android or iOS Smartphone. Students of the Department of Psychology were offered credits in exchange for their participation. All participants signed informed consent and authorized the use of their data, and drop-out was permitted at any moment. The study was approved by the Ethical Committee of the University of Milan-Bicocca.

Participants completed baseline questionnaires online, on their smartphone or computer, through a specific link. At the end of the baseline survey, they were automatically given instructions regarding the daily assessment: each participant had to download an app, developed by the Department for intensive longitudinal data collection, and register to the study through a code. The study had a daily-diary, time-contingent design (Trull & Ebner-Priemer, 2009): since the registration, each participant received for 28 days a daily push notification on his/her mobile to fill in a brief questionnaire, at 7.00 p.m. (with reminders at 8.00, 9.00 and 10.00 p.m., if ignoring the previous notifications). Daily questionnaires asked participants to rate the items basing on the last 24 hours only.

Two hundred and twenty three participants agreed to participate to the study and completed at least the baseline assessment (M_{age} = 22.31, *SD* = 2.08, age-range = 18-28). Individuals who completed less than 5 daily assessments (≃ 20%) were excluded from analyses, resulting in a final sample of 196 participants (M_{age} = 22.32, *SD* = 2.09, age-range = 18-27)[2], with an average number of completed daily questionnaires of 23.60 (*SD* = 5.03) out of 28.

The majority of participants were females (N = 153; 78%). Around 96% of participants were unmarried (N = 188), whereas only 8 participants (4%) were married or living with a

[2] Note that no significant difference in daily shame was found among those who required (N = 155) and those who did not require (N = 41) credits (aggregated person means: $t(52.91) = 0.21$; $p = 0.83$): the two groups were collapsed in one sample for all analyses.

partner. Around 40% of the sample (N = 79) had a high school level of education, 113 participants (58%) had a bachelor degree, and only 4 participants (2%) had not achieved a high school diploma. Participants were mostly full-time or part-time students (N = 180; 92%), whereas 12 participants declared to be full-time workers (6%) and only 4 were unemployed (2%).

6.3.2 Baseline measures

Brief Pathological Narcissism Inventory (B-PNI, Schoenleber et al., 2015). The B-PNI is a 28-item short version of the Pathological Narcissism Inventory (Pincus et al., 2009; Italian version in Fossati et al., 2015). The B-PNI assesses 7 dimensions of narcissism, tapping onto the two higher order factors of grandiose narcissism (12 items) and vulnerable narcissism (16 items). Grandiose narcissism (GN) includes three dimensions – grandiose fantasy, exploitativeness, and self-sacrificing self-enhancement – whereas vulnerable narcissism (VN) includes dimensions of contingent self-esteem, entitlement rage, devaluing, and hiding the self. Participants are asked to rate their level of agreement with each statement, using a 6-point Likert scale (0 = not at all like me; 5 = very much like me). The two higher order scales showed good internal consistency in the current study (grandiose narcissism: α = 76; vulnerable narcissism: α = .88).

Five-Factor Narcissism Inventory – Short Form (FFNI-SF, Sherman et al., 2015; Italian version in Fossati et al., 2018). The FFNI-SF is a 60-item short version of the FFNI (Glover et al., 2012), assessing both grandiose and vulnerable narcissistic manifestations. Items are rated on a 5-point Likert scale ranging from 1 (“disagree strongly”) to 5 (“agree strongly”). The grandiose narcissism scale includes facets of indifference, exhibitionism, authoritativeness, thrill seeking, grandiose fantasies, manipulativeness, exploitativeness, entitlement, lack of empathy and arrogance. The vulnerable narcissism scale includes facets of cynicism/distrust,

need for admiration, shame and reactive anger. For the purpose of this study, only the two higher order scores of grandiose and vulnerable narcissism were considered (grandiose narcissism: α = .91; vulnerable narcissism: α = .84).

Personality Inventory for the DSM-5, Negative Affectivity subscale (PID-5, Krueger, Derringer, Markon, Watson, & Skodol, 2012; Italian version in Fossati, Krueger, Markon, Borroni, & Maffei, 2013). The PID-5 is a 220-item self-report measure assessing five broad domains of maladaptive personality (negative affect, detachment, antagonism, disinhibition, psychoticism). Items are rated on a 4-point scale ranging from 0 (very false or often false) to 3 (very true or often true). For the purpose of this study, only the 23 negative affectivity items were administered to the participants, tapping onto facets of separation insecurity, anxiousness, and emotional lability: the negative affectivity score is the average of the three facets. Only the domain score was considered in the present study (α = .93).

Rosenberg self-esteem scale (RSES, Rosenberg, 1965; Italian version in Prezza, Trombaccia, & Armento, 1997). The RSES is a 10-item self-report measure using a 7-point response format ranging from 1 (strongly disagree) to 7 (strongly agree). The questionnaire assesses trait global self-esteem. The score is computed by averaging the items after adapting reverse ones (α = .89).

Personal Feelings Questionnaire-2 (PFQ-2, Harder & Zalma, 1990). The PFQ-2 is a 22-item self-report measure assessing both shame-proneness and guilt-proneness. Participants are asked to rate how often they experience the feeling described in each item using a 5-point Likert scale (0 = you never experience the feeling; 4 = you experience the feeling continuously or almost continuously). Cronbach's alphas for the shame scale was .84.

6.3.3 Daily measures[3]

Personal Feelings Questionnaire-2 (PFQ-2, Harder & Zalma, 1990). As in previous studies (i.e., Turner, 2014), instructions of the PFQ-2 were adapted for state/daily assessment, whereas the response format was not changed. Only the 10 shame-proneness items were included in the daily survey. Between- and within-person reliability estimates were α_{BP} = .95 and α_{WP} = .87 (see below for a description of the computation of such estimates).

Single Item Self-Esteem (SISE, Robins, Hendin, & Trzesniewski, 2001). The SISE is a single-item statement assessing state global self-esteem (e.g., Giacomin & Jordan, 2016b, 2016a). Participants were asked to rate the item 'Today, I have high self-esteem' on a 5-point scale ranging from 1 (not very true of me) to 5 (very true of me). The single item is an adaptation for daily assessment of the original item 'Right now, I have high self-esteem'.

Personality Dynamics Diary - Daily situations (PDD, Zimmermann et al., 2019). The PDD-situation is an 11-item self-report measure for the assessment of daily situations. Participants are asked to rate whether each item applies to their day on a scale ranging from 0 (very false) to 3 (very true). With the exception of item 11 ('I was alone or had hardly any social contacts'), items load onto three factors: workload (2 items), social stress (4 items), and positive events (4 items). Scores are computed by averaging the items. Reliability estimates were α_{BP} = .93 and α_{WP} = .85 for workload, α_{BP} = .89 and α_{WP} = .79 for social stress, α_{BP} = .82 and α_{WP} = .71 for positive events.

Narcissistic Grandiosity Scale-6 (NGS-6, Rosenthal, Hooley, & Steshenko, 2007; Crowe, Carter, Campbell, & Miller, 2016). The NGS is a six-item self-report adjective-based measure of grandiose narcissism (e.g., glorious, powerful). Participants are invited to describe

[3] The SISE and the PDD were translated into Italian through back-translation procedure. The NVS-6 and the NGS-6 were translated into Italian through back-translation and pre-tested on a community sample (N = 94 (30 men); M_{age} = 33.15; SD = 13.24; range = 18-76). Cronbach's alphas for the measures in the pre-test were .76 (NVS-6) and .88 (NGS-6).

themselves ('Today, to what degree did you feel…') using a 9-point Likert scale ranging from 1 (not at all) to 9 (extremely). A total score was computed for each day by averaging the items. Reliability estimates were α_{BP} = .97 and α_{WP} = .90.

Narcissistic Vulnerability Scale-6 (NVS-6, Crowe et al., 2018). The NVS is a six-item self-report adjective-based measure of vulnerable narcissism (e.g., underappreciated, insecure). As for the NGS, participants were invited to describe themselves ('Today, to what degree did you feel…') using a 9-point Likert scale ranging from 1 (not at all) to 9 (extremely). A total score was computed for each day by averaging the items. Reliability estimates were α_{BP} = .92 and α_{WP} = .81.

6.3.4 Statistical analyses

Analyses were performed within the statistical environment R, version 3.5.2 (R Core Team, 2018; RStudio Team, 2016, R codes are available in Appendix D). We used the package "psych" (Revelle, 2018) to explore zero-order correlations: each daily (Level 1) variable was aggregated across the 28 days to obtain a person-mean score and correlations were computed including all baseline (Level 2) variables, and aggregated Level 1 variables. The package "psych" was also used to compute *Cronbach's alphas* (α) for each baseline scale, whereas within- and between-person consistency estimates of Level 1 variables were computed in Mplus 7 (Hallquist & Wiley, 2018; Muthén & Muthén, 2012), using multilevel factor analysis based on polychoric correlations (Geldhof, Preacher, & Zyphur, 2014).

All multilevel models were fitted through the package "lme4" (Bates, Mächler, Bolker, & Walker, 2015), and were based on Full Maximum Likelihood estimation and bobyqa-algorithm optimization (Powell, 2009). P-values were obtained through the package "lmerTest" (Kuznetsova, Brockhoff, & Christensen, 2017).

Prior to testing the hypotheses, a series of intercept-only models were fitted, one for each Level 1 variable used as dependent variable: then, *Intraclass Correlation Coefficients* (*ICC*) were computed as the ratio between the variance of random intercepts and the total variance of each variable, thus expressing the percentage of variance attributable to between-person differences. Also, four different multilevel models were set to investigate if variability in Level 1 shame (dependent variable) was associated with time (scaled in days and ranging from 0 to 27): an intercept-only model, a random-intercept model with a fixed effect of time, and two random-slope models with random effect of time (uncorrelated and correlated with the intercept of Level 1 shame respectively). The four models were compared through the *Bayesian* and the *Akaike Information Criteria* (Akaike, 1981; Burnham & Anderson, 2002; Schwarz, 1978): based on the results of the comparison (for details, see supplementary tables in Appendix E), a random effect of time was included in all models; the slope of time was correlated with the intercept of Level 1 shame, unless convergence or singularity issues suggested to simplify the random structure.

Hence, a series of multilevel models were estimated to specifically address the hypotheses regarding shame and narcissism. All models had Level 1 shame as dependent variable[4]. Each Level 2 predictor was centered on the sample mean for better interpretability, whereas each Level 1 predictor was disaggregated into a between- and a within-person part. The within-person part was computed by person-mean centering each daily score of the given variable: the resulting Level 1 variables specifically represented within-person variations around the person's mean. The between-person part was obtained by grand-mean centering each participant's average state-score of the given variable: the resulting Level *2* variables expressed the difference between a participant's average state-score and the sample mean, and

[4] Given deviations from normality, analyses were also performed with log-transformed Level 1 shame as dependent variable. These models are presented in Appendix E and yielded very similar results.

therefore represented the general tendency of a person to score higher or lower than the sample average on a certain daily measure. Models included a random slope for each Level 1 predictor (its within-person part): however, due to convergence and singularity issues, the random structure of the most complex models was simplified by eliminating the random effects whose variance was closest to zero (see the R code for details). All analyses including Level 2 narcissism were repeated twice, using the B-PNI and the FFNI-SF respectively.

First, the association between Level 1 shame and Level 2 trait narcissism (grandiose and vulnerable) was tested, controlling for time, and Level 2 negative affectivity and self-esteem. Then, the same analysis was repeated using Level 1 grandiose and vulnerable narcissism, and controlling for Level 1 daily self-esteem, Level 2 negative affectivity, and time. For each of these model, it was also subsequently tested whether daily situations moderated the effects of narcissism on daily shame, running a separate model for each situational variable. Models with situations included all main effects, plus the interaction of the within-person part of the included situation with both grandiose and vulnerable narcissism. For Level 1 narcissism, the interaction was with the within-person parts of both grandiose and vulnerable narcissism.

6.4 Results

Participants' average baseline shame was 15.01 points (SD = 6.69, range = 2-38; N = 198), whereas the mean level for daily shame across days and participants was 4.97 (SD = 5.74, range = 0-40, N = 4626). Table 6.1 shows Pearson zero-order correlations at the between-person level and includes *ICC*s for Level 1 variables. As can be seen, daily shame (averaged) was positively associated with trait vulnerable narcissism, as measured by both the B-PNI and the FFNI-SF, but also positively associated with B-PNI trait grandiose narcissism. Moreover, daily shame showed a high positive association with trait shame, a high negative

Table 6.1. Zero-order correlations among the variables, and *ICC*s of Level 1 variables.

	Baseline variables								Daily variables (person means)						
	Age	**FFNI-V**	**BPNI-V**	**FFNI-G**	**BPNI-G**	**PFQSB**	**PID-NA**	**RSES**	**NVS**	**NGS**	**SISE**	**PFQSD**	**SS**	**PE**	**WL**
FFNI-V	-.07	-													
BPNI-V	-.14*	.73**	-												
FFNI-G	-.04	.09	.11	-											
BPNI-G	-.15*	.35**	.47**	.44**	-										
PFQSB	-.06	.55**	.52**	-.14*	.14*	-									
PID-NA	-.16*	.65**	.53**	-.03	.35**	.56**	-								
RSES	-.03	-.52**	-.50**	.27**	.00	-.61**	-.52**	-							
NVS	-.02	.28**	.26**	.01	.26**	.33**	.28**	-.26**	**.50**						
NGS	-.03	-.17*	-.16*	.42**	.24**	-.29**	-.19*	.36**	.13	**.60**					
SISE	.00	-.47**	-.44**	.21*	-.09	-.52**	-.46**	.67**	-.29**	.48**	**.48**				
PFQSD	.03	.32**	.30**	-.06	.21*	.50**	.29**	-.40**	.72**	-.07	-.39**	**.46**			
SS	.08	.19*	.15*	.08	.27**	.22*	.23**	-.22*	.67**	.09	-.17*	.65**	**.35**		
PE	-.01	-.19*	-.25**	.18*	.11	-.32**	-.12	.34**	-.06	.61**	.47**	-.10	.04	**.35**	
WL	-.01	.17*	.10	.13	.20*	.08	.15*	-.10	.27**	.16*	-.17*	.30**	.22**	.22*	**.36**

Note. *ICC*s are in bold on the diagonal; N (participants) = 196; Number of observations = 4626; FFNI-V = FFNI vulnerable narcissism; BPNI-V = BPNI vulnerable narcissism; FFNI-G = FFNI grandiose narcissism; BPNI-G = BPNI grandiose narcissism; PFQSB = PFQ-shame baseline; Negaff = PID-5 negative affectivity; RSES = Rosenberg self-esteem scale; NVS = Narcissistic vulnerability scale (person mean); NGS = Narcissistic grandiosity scale (person mean); SISE = Single item self-esteem (person mean); PFQSD = PFQ-shame daily (person mean); SS = Daily Social Stress (person mean); PE = Daily positive events (person mean); WL = Daily Work Load (person mean); I = Daily Isolation PDD-11 (person mean). *p < .05; **p < .001

Association with trait and daily self-esteem, and a significant positive association with trait negative affectivity.

6.4.1 Trait (Level 2) narcissism and shame

Results from random-intercept models with the Level 2 predictors (trait grandiose and vulnerable narcissism, self-esteem, and negative affectivity) are presented in Table 6.2. As can be seen, when using the B-PNI, trait grandiose narcissism was positively associated with daily shame, whereas trait vulnerable narcissism was non-significantly associated with it. Also, trait self-esteem was negatively associated with daily shame. When using the FFNI-SF, though, both trait grandiose and vulnerable narcissism did not have significant effects above and beyond self-esteem. Trait negative affectivity did not have any incremental effect on daily shame in the models.

To further understand the associations between B-PNI scales and daily shame, we performed additional analyses re-running the model using the facet-scales of the measure (*Cronbach's alphas* from .68 to .84), instead of the higher order scores. Results showed that the grandiose facets of "exploitativeness" (B = 0.82; t = 2.43; $p < .05$) and "grandiose fantasy" (B = 0.89; t = 3.09, $p < .01$) were positively related to Level 1 shame. Also, a significant association with Level 1 shame emerged for the vulnerable facets of "entitlement rage" (negative association: B = -1.22; t = -3.53; $p < .001$) and "devaluing" (positive association: B = 0.81; t = 2.24; $p < .05$). Hence, the unique positive association between grandiose narcissism and shame was most likely due to the dimensions of exploitativeness and grandiose fantasy. This finding was also partly corroborated when performing the same analysis with the facets of the FFNI-SF (*Cronbach's alphas* from .55 to .90): "grandiose fantasies" had a positive and significant association with Level 1 shame (B = 0.24; t = 2.50, p

< .05), whereas the FFNI-SF dimension of exhibitionism was negatively related to it (*B* = -0.21; *t* = -2.39, *p* < .05).

Table 6.2. Random-intercepts models with Level 2 narcissism and controls.

	B-PNI [1]			FFNI-SF [2]		
	Estimate	*SE*	*t*	*Estimate*	*SE*	*t*
Intercept	5.53	0.27	20.21**	5.53	0.28	19.74**
Day	-0.03	0.01	-2.77*	-0.03	0.01	-2.78*
GN	1.46	0.51	2.88*	0.00	0.01	0.43
VN	-0.09	0.47	-0.20	0.04	0.03	1.11
PID-NA	0.41	0.59	0.70	0.71	0.63	1.14
RSES	-2.75	0.60	-4.56**	-2.21	0.60	-3.68**

Note. Dependent variable: Level 1 shame; N (participants) = 196; Number of observations = 4626; GN = grandiose narcissism (centered); VN = vulnerable narcissism (centered); PID-NA = PID-5 negative affectivity (centered); RSES = Rosenberg Self-Esteem Scale (centered); *SE* = Standard Error. *p < .01; **p < .001

[1] The model was tested measuring grandiose and vulnerable narcissism through the Brief Pathological Narcissism Inventory (B-PNI).

[2] The model was tested measuring grandiose and vulnerable narcissism through the Five Factor Narcissism Inventory-Short Form (FFNI-SF).

6.4.2 Interaction between trait (Level 2) narcissism and situations

Models including daily situations and trait (Level 2) narcissism and controls are presented in Table 6.3. Social stress and work load (within- and between-person parts) were positively associated with Level 1 shame. On the other hand, participants were less likely to report feelings of shame on days when they experienced more positive events, given the negative association between positive events (within-person part) and Level 1 shame. The effects of FFNI-SF trait narcissism remained non-significant across these models but, when controlling for social stress, a significant positive effect of FFNI-SF vulnerable narcissism emerged. Instead, the effect of B-PNI grandiose narcissism became non-significant when controlling for social stress only.

Finally, several significant interactions emerged between trait narcissism and situations (see Figures 6.1 to 6.3). To better explore these interactions, simple-slope analyses were performed through the package "reghelper" (Hughes, 2018), and 95% confidence intervals were computed multiplying the standard error of each estimate by 1.96. Findings showed that social stress moderated the association between trait vulnerable narcissism and daily shame, such that for higher levels of social stress, FFNI-SF vulnerable narcissism was more strongly associated with shame (Figure 6.1): simple-slope analysis indicated that the effect of FFNI-SF vulnerable narcissism was significant for high (B = 0.09; t = 2.85; CI = [0.03, 0.15]) and average levels (B = 0.06; t = 2.14; CI = [0.01, 0.11]) of daily social stress, but not for low levels of it (B = 0.03; t = 1.12; CI = [-0.02, 0.09]). B-PNI and FFNI-SF vulnerable narcissism both showed to be more strongly associated with higher shame when participants experienced higher work load (Figures 6.2a and 6.2b). In simple-slope analyses, however, the effects of vulnerable narcissism were not significantly different from zero at any level of work load, either for the B-PNI (for high work load: B = 0.40; t = 0.80; CI = [-0.38, 1.18]; for average work load: B = 0.11; t = 0.24; CI = [-0.78, 0.99]; for low work load: B = -0.18; t = -0.41; CI = [-1.07, 0.70]) and for the FFNI-SF (high: B = 0.07; t = 1.95; CI = [-0.00, 0.14]; average: B = 0.04; t = 1.09; CI = [-0.03, 0.10]; low: B = 0.00; t = 0.08; CI = [-0.06, 0.07]). Similarly, work load also moderated the association between B-PNI grandiose narcissism and daily shame (Figure 6.2c): at simple-slope analyses, B-PNI grandiose narcissism was positively associated with shame for high (B = 1.53; t = 2.79; CI = [0.46, 2.61]) and average (B = 1.15; t = 2.33; CI = [0.18, 2.12]) levels of work load, but not for low levels of it (B = 0.77; t = 1.56; CI = [-0.19, 1.74]).

Finally, higher levels of positive events reduced the strength of the association between FFNI-SF vulnerable narcissism and Level 1 shame (Figure 6.3), but the effect of FFNI-SF vulnerable narcissism was not significant at any level of daily positive events (high: B = 0.02;

Table 6.3. Random-intercept models with Level 2 narcissism and controls, and interaction with situations

	Social Stress				Work Load				Positive Events			
	B-PNI [1]		FFNI-SF [2]		B-PNI [1]		FFNI-SF [2]		B-PNI [1]		FFNI-SF [2]	
	Estimate	*T*	*Estimate*	*t*	*Estimate*	*t*	*Estimate*	*t*	*Estimate*	*t*	*Estimate*	*t*
Intercept	5.36	22.60**	5.37	22.46**	5.54	21.17**	5.55	20.68**	5.56	19.61**	5.57	19.15**
Day	-0.02	-1.94	-0.02	-1.94	-0.03	-2.84*	-0.03	-2.88*	-0.03	-2.72*	-0.03	-2.75*
Situation.wpc	4.87	14.94**	4.87	15.20**	1.23	8.70**	1.25	8.84**	-0.50	-2.62*	-0.51	-2.67*
Situation.bpc	9.56	10.95**	9.74	11.59**	1.77	4.01**	1.96	4.39**	-0.16	-0.24	0.09	0.13
GN	0.14	0.34	-0.01	-1.34	1.15	2.33*	0.00	-0.08	1.46	2.83*	0.00	0.39
VN	0.53	1.40	0.06	2.14*	0.11	0.24	0.04	1.09	-0.13	-0.27	0.04	1.04
RSES	-1.62	-3.30*	-1.34	-2.84*	-2.46	-4.31**	-2.06	-3.66**	-2.66	-4.37**	-2.18	-3.55**
PID-NA	-0.19	-0.40	-0.34	-0.70	0.24	0.43	0.49	0.83	0.52	0.89	0.84	1.34
Situation X GN	0.81	1.44	0.02	1.72	0.55	2.26*	0.00	0.78	-0.19	-0.55	0.00	-0.50
Situation X VN	0.73	1.57	0.09	2.90*	0.42	2.00*	0.05	3.58**	-0.38	-1.37	-0.04	-2.02*

Note. Dependent variable: Level 1 shame; N (participants) = 196; Number of observations = 4626. GN = grandiose narcissism (centered); VN = vulnerable narcissism (centered); PID-NA = PID-5 negative affectivity (centered); RSES = Rosenberg Self-Esteem Scale (centered); Situation.wpc & Situation.bpc = within- and between-person part of the situations in the columns. Situation X GN = Interaction of the situation (within-person part) with grandiose narcissism; Situation X VN = Interaction of the situation (within-person part) with vulnerable narcissism. *p < .05; **p < .001

[1] The models were tested measuring grandiose and vulnerable narcissism through the Brief Pathological Narcissism Inventory (B-PNI).

[2] The models were tested measuring grandiose and vulnerable narcissism through the Five Factor Narcissism Inventory-Short Form (FFNI-SF).

Figure 6.1

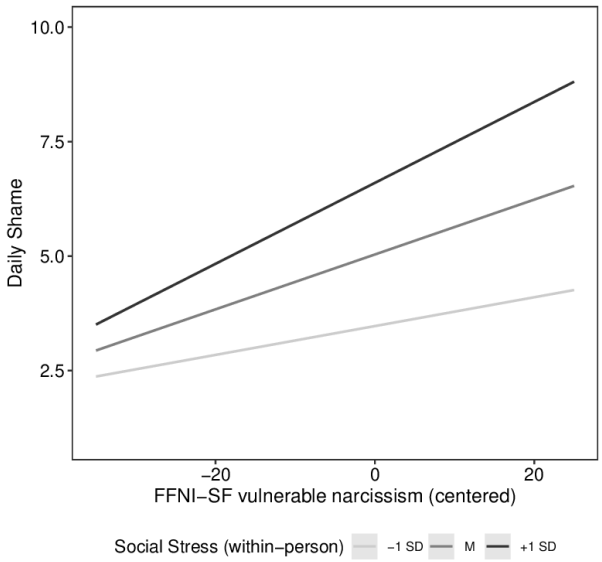

Figure 6.2a

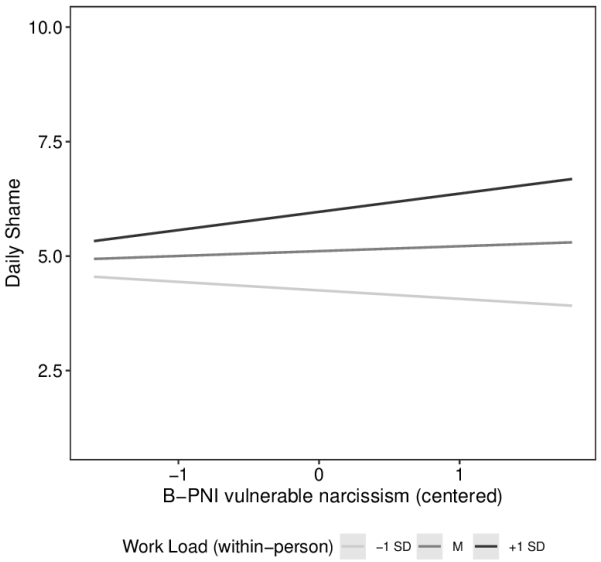

Figure 6.2b

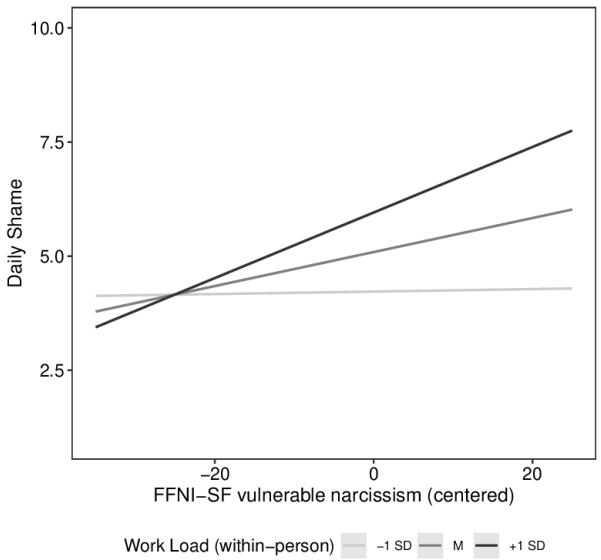

Figure 6.2c

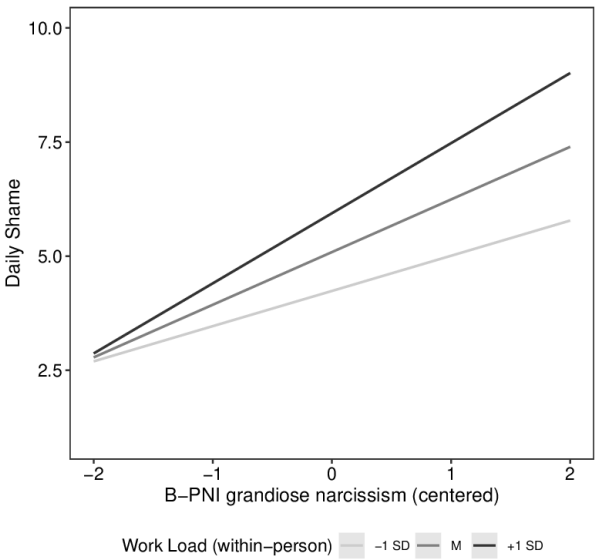

Figure 6.3

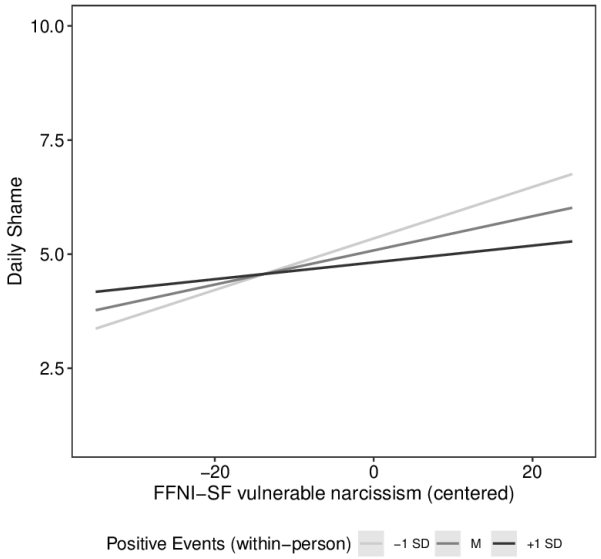

Figure 6.1. Predicted values of shame from Level 2 vulnerable narcissism (FFNI-SF) at different levels of daily social stress.

Figure 6.2a. Predicted values of shame from Level 2 vulnerable narcissism (B-PNI) at different levels of daily work load.

Figure 6.2b. Predicted values of shame from Level 2 vulnerable narcissism (FFNI-SF) at different levels of daily work load.

Figure 6.2c. Predicted values of shame from Level 2 grandiose narcissism (B-PNI) at different levels of daily work load.

Figure 6.3. Predicted values of shame from Level 2 vulnerable narcissism (FFNI-SF) at different levels of daily positive events.

t = 0.51; *CI* = [-0.05, 0.09]; average: *B* = 0.04; *t* = 1.04; *CI* = [-0.03, 0.11]; low: *B* = 0.06; *t* = 1.47; *CI* = [-0.02, 0.13]).

6.4.3 Daily (Level 1) narcissism and shame

When considering the random-slope model with Level 1 narcissism and self-esteem, and Level 2 negative affectivity as control (see Table 6.4), results showed that daily vulnerable narcissism was positively associated with daily shame, both in its within- and between-person parts. That is, individuals tended to report more shame across days if they were higher in vulnerable narcissism on average, compared to other persons (between-person part); also, they reported experiencing more shame in days when they felt more vulnerable than usual (within-person part). Daily grandiose narcissism was also positively associated with shame, in its within-person part: subjects reported experiencing more shame on days when they described themselves as more grandiose than usual. Daily self-esteem was instead negatively associated with shame in its within-person part: that is, individuals tended to score lower on shame on days when they reported higher self-esteem than usual.

Table 6.4. Random-slope models with Level 1 narcissism and controls

	Estimate	*SE*	*t*
Intercept	5.26	0.21	25.36**
Day	-0.01	0.01	-1.23
VN.wpc	1.80	0.11	17.06**
VN.bpc	2.56	0.2	13.11**
GN.wpc	0.29	0.07	4.43**
GN.bpc	-0.25	0.18	-1.37
SISE.wpc	-1.01	0.13	-7.91**
SISE.bpc	-0.49	0.32	-1.53
PID-NA	0.35	0.37	0.94

Note. Dependent variable: Level 1 shame; N (participants) = 196; Number of observations = 4626. VN.wpc = daily vulnerable narcissism (within-person part); VN.bpc = daily vulnerable narcissism (between-person part); GN.wpc = daily grandiose narcissism (within-person part); GN.bpc = daily grandiose narcissism (between-person part); SISE.wpc = daily self-esteem (within-person part); SISE.bpc = daily self-esteem (between-person part); PID-NA = PID-5 negative affectivity (centered); *SE* = Standard Error. *p < .05; **p < .001

6.4.4 Interaction between daily (Level 1) narcissism and situations

When controlling for Level 1 narcissism and self-esteem (see Table 6.5), main effects of situations on daily shame were positive and significant for social stress, work load (within- and between-person parts), and even positive events (within-person parts). Thus, participants reporting on average more social stress and work load also tended to score higher in daily shame across days. Furthermore, participants reported higher shame on days when they experienced more social stress, work load, and even positive events. Level 1 vulnerable narcissism remained significantly associated with shame in all models (both in its within- and between-person parts). Similarly, the within-person part of grandiose narcissism also remained significantly associated with shame, except when including positive events in the model. Finally, no significant interaction emerged between Level 1 narcissism and situations, suggesting that the association of daily narcissism with daily shame is not qualified by specific situational variables.

6.5 Discussion

The present study investigated experiences of shame related to pathological narcissism, and tested which situations are more likely to exacerbate such emotional reactions, while controlling for potential confounds and considering narcissism from multiple perspectives.

Regarding trait narcissism, hypotheses were only partly confirmed. At the zero-order level, all narcissism scales except FFNI-SF grandiose narcissism were positively correlated with shame; however, in regression models daily experiences of shame were positively related to trait grandiose narcissism as assessed by the B-PNI, whereas weak evidence was found that vulnerable narcissism (both FFNI-SF and B-PNI) uniquely predicted daily experiences of shame across the 28 days. Interestingly, the effect of vulnerable narcissism was most likely absorbed by self-esteem across the models: individuals with low self-esteem, rather than with

high vulnerable narcissism, experienced more daily shame. Overall, results do not indicate that vulnerable narcissists are not likely to experience shame: they rather suggest that dispositionally vulnerable narcissists experience shame especially due to their low levels of global self-esteem. However, this is not the case when individuals experience social stress: the present study shows that individuals high in trait vulnerable narcissism (FFNI-SF) experience more feelings of shame when faced with higher social stress than usual, regardless of their level of self-esteem. On the contrary, dispositional grandiose narcissism as measured by the B-PNI does not specifically predict feelings of shame when experiencing situations of social stress. The present study further shows that positive events may protect vulnerable narcissists (FFNI-SF) from experiencing shame, even though the effect of narcissism was not significant when tested with simple-slope analyses.

These findings corroborate the idea that positive events (Zeigler-Hill & Besser, 2013), and social events above all (Geukes et al., 2017; Zeigler-Hill & Besser, 2013), may be particularly salient for high vulnerable narcissists. Contrary to expectations, however, participants high on trait vulnerable narcissism (both B-PNI and FFNI-SF) may also be more likely to experience shame on days with higher work load than usual. Albeit not sustained by simple-slope analyses, this finding may suggest that vulnerable narcissists are highly sensitive to achievements and failures as students or workers: high vulnerable narcissists may also harbour expectations of being performant without particular efforts, thus experiencing high work load as a shameful disconfirmation to their entitled expectations. Results also suggest that such dynamics are similar for grandiose and vulnerable narcissists, as high grandiose narcissists also experienced more shame on days with high and average work load, but not on days with low levels of work load.

Table 6.5. Random-slope models with Level 1 narcissism and controls, and interaction with situations

	Social Stress			Work Load			Positive Events		
	Estimate	*SE*	*t*	*Estimate*	*SE*	*t*	*Estimate*	*SE*	*t*
Intercept	5.21	0.20	26.19**	5.27	0.20	26.01**	5.16	0.21	24.78**
Day	-0.01	0.01	-1.06	-0.01	0.01	-1.42	0.00	0.01	-0.52
VN.wpc	1.49	0.11	13.08**	1.73	0.10	16.73**	1.84	0.10	17.65**
VN.bpc	1.73	0.24	7.28**	2.44	0.19	12.75**	2.56	0.20	13.01**
GN.wpc	0.25	0.06	3.99**	0.23	0.06	3.63**	0.05	0.07	0.72
GN.bpc	-0.19	0.17	-1.12	-0.28	0.18	-1.54	-0.33	0.21	-1.60
SISE.wpc	-0.97	0.12	-8.12**	-0.96	0.12	-8.10**	-1.12	0.12	-9.30**
SISE.bpc	-0.59	0.30	-1.94	-0.36	0.32	-1.13	-0.57	0.33	-1.74
PID-NA	0.14	0.35	0.41	0.31	0.36	0.86	0.31	0.38	0.82
Situation.wpc	1.73	0.29	5.87**	0.64	0.10	6.22**	0.94	0.14	6.48**
Situation.bpc	4.88	0.94	5.19**	0.90	0.34	2.62*	0.66	0.61	1.10
Situation X GN	-0.14	0.17	-0.83	0.03	0.08	0.43	0.00	0.09	0.05
Situation X VN	0.14	0.12	1.15	0.09	0.07	1.30	-0.12	0.10	-1.16

Note. Dependent variable = Level 1 shame; N (participants) = 196; Number of observations = 4626. VN.wpc = daily vulnerable narcissism (within-person part); VN.bpc = daily vulnerable narcissism (between-person part); GN.wpc = daily grandiose narcissism (within-person part); GN.bpc = daily grandiose narcissism (between-person part); SISE.wpc = daily self-esteem (within-person part); SISE.bpc = daily self-esteem (between-person part); PID-NA = PID-5 negative affectivity (centered); Situation.wpc & Situation.bpc = within- and between-person part of the situations in the columns; Situation X GN = Interaction of the situation (within-person part) with grandiose narcissism (within-person part); Situation X VN = Interaction of the situation (within-person part) with vulnerable narcissism (within-person part); *SE* = Standard Error. *p < .01; **p < .001

Essentially in line with previous findings, results globally suggest that vulnerable narcissists' extreme insecurity and covert antagonism make them sensitive to both social (i.e., communal) and performance-related (i.e., agentic) events. Positive events are interpreted as signals of being competent or accepted, negative interpersonal events are perceived as harmful rejections (Geukes et al., 2017; Zeigler-Hill & Besser, 2013), and excessive work load is experienced as a source of shame. Grandiose narcissists may instead be predominantly shaked by performance-related events only (i.e., work load, see also Zeigler-Hill & Besser, 2013). In fact, the present study assessed social stress in terms of hostility (e.g., 'I was ignored or rejected by others') and interpersonal disappointments (e.g., 'I was left in the lurch by a close person'), events that are mostly communal in nature and that were found to affect experiences of shame of individuals high in vulnerable narcissism only. The positive events scale included instead a mixture of communal (e.g., 'I received support from others') and agentic experiences (e.g., 'I had a success in school or work'), affecting again only vulnerable narcissists' experiences of shame in the present study. Finally, work load items (e.g., 'I was under high pressure to succeed…') tap onto potential failures in performance-oriented situations, that were relevant for both grandiose and vulnerable trait narcissism.

Additional facet-level analyses are also worthy of comments. In the domain of trait vulnerable narcissism, results revealed that B-PNI entitlement rage was negatively related to shame, whereas devaluing was positively associated with it. These heterogeneity in the construct may also represent an additional reason for the non-significant main effects of vulnerable narcissism as a whole. Also, these results help interpreting current findings. As in Study 2, evidence suggest that individuals who tend to react with anger to unmet entitled expectations are less likely to consciously experience feelings of shame (Bushman & Baumeister, 1998; Schoenleber & Berenbaum, 2012). On the other hand, individuals who tend to devalue intimacy for fear of disappointment are more likely to experience shame in

real life contexts: those individuals may either be ashamed of their own dependency on others' approval and positive feedback (Freis et al., 2015; Pincus et al., 2009), or alternatively be more sensitive to interpersonal frustrations. Despite inconsistent at the higher order level, we found unique positive associations of daily shame with lower-order facets of grandiose narcissism, measured both through the FFNI-SF and the B-PNI. For instance, grandiose fantasies showed to predict daily experiences of shame. Authors suggested that dispositionally grandiose narcissists are likely to exhibit aspects of vulnerable narcissism (Edershile & Wright, 2019a; Gore & Widiger, 2016). In line with this, findings suggest that grandiose fantasies *per se* may be the source of vulnerable experiences, at least when considering shame as an outcome. Exceeding "healthy" self-esteem, grandiose fantasies really seem to incorporate aspects of self-criticism: the so-called "grandiose self", a pathological ideal self with magical and omnipotent qualities, may acquire sadistic and highly critical aspects whenever the person is not able to achieve high standards, or is faced with limitations and inevitable flaws in the self (Broucek, 1982; Kernberg, 1975; Wurmser, 1981). In this sense, shame may always be standing behind the corner of grandiose fantasies. Again, the higher-order FFNI-SF grandiose narcissism may not be related to shame due to the negative counterbalancing effect of exhibitionistic tendencies, a finding that is consistent with psychodynamic descriptions of exhibitionism as a reaction formation against shame (Broucek, 1982). After all, FFNI-SF exhibitionism is operationalized as proneness to attention-seeking "*without reference to feelings of insecurity*" (Glover et al., 2012, p. 502), and FFNI-SF grandiose narcissism is known to encompass aspects of negative affectivity to a much lower extent than the B-PNI corresponding scale (Miller, Lynam, & Campbell, 2016; Wright, 2016). Of note, however, is that the B-PNI facet of exploitativeness was now positively associated with daily shame, despite being recognized as the only clearly overtly grandiose facet of the measure (Miller, Widiger, & Campbell, 2010; Wright, 2016). Exploitative tendencies are an

expression of antagonistic features: Edershile & Wright (2019a) recently suggested that fluctuations in narcissism may be driven by high dispositional antagonism, as this trait showed positive associations with momentary means of both grandiose and vulnerable narcissism. Even though the present study did not directly assess fluctuations, it did show that grandiose facets predicted subsequent experiences of shame, an affect that is usually included in descriptions of vulnerable narcissism (e.g., Glover et al., 2012; Pincus et al., 2009). Taken together, findings suggest that both exploitative tendencies and grandiose fantasies seem to paradoxically increase shame. Interestingly, antagonism (i.e., exploitativeness, Miller, Lynam, McCain, et al., 2016) and grandiose fantasies (Di Pierro et al., 2019) are described as central features of pathological narcissism: this is an important hint to the centrality of shame in pathological narcissistic functioning. Nevertheless, besides suggesting that central features of pathological narcissism increase experiences of shame, the specific mechanism linkning explotative tendencies with shame may require further clarification and replication (e.g., the corresponding scale in the FFNI-SF was not significantly related to shame).

Models with daily narcissism showed a partly different scenario. In this case, both grandiose and vulnerable narcissism remained significantly associated with shame above state self-esteem. In fact, results showed that individuals felt more shame on days when state grandiose and vulnerable narcissism were more pronounced; also, those who tended to describe themselves as more narcissistically vulnerable across the 28 days on average, were also reporting to experience more daily shame. In other words, an association did not fail to emerge when considering narcissism and shame assessed at the same (daily) level (Edershile & Wright, 2019a; Fleeson & Gallagher, 2009): vulnerable self-states were robustly linked to heightened experiences of shame, regardless of daily situations and self-esteem. On the other hand, associations between grandiose self-states and feelings of shame can be counterintuitive. As previously stated, one can imagine that a grandiose self-experience can

induce shame due to excessively high standards, as a grandiose self may come with a psychological cost. For instance, recent findings suggest that grandiose narcissism relates to perfectionistic cognitions, including concerns for not being perfect and excessive need for goal achievement (Smith et al., 2016). At the daily level, however, the opposite pathway is also possible: daily shame may defensively induce grandiose states to compensate self-inadequacy and mental pain. These results are in line with previous findings on daily negative affects (Edershile et al., 2019), and indicate that grandiose narcissism and shame are not incompatible. The effect of daily grandiose narcissism only became non-significant when controlling for positive events. However, this result might be due to the fact that the NGS and the positive events scale share a similar content (they are highly correlated at the zero-order level), so that positive events absorbed the effect of daily grandiose narcissism. In fact, positive events surprisingly showed to have a unique positive effect on daily shame in the current study, such that higher positive events than usual were associated with higher shame. Although similar results have been reported regarding the moderating role of positive feedback on narcissism and shame, or self-esteem and shame (Brummelman, Crocker, & Bushman, 2016; Brummelman, Thomaes, Orobio de Castro, Overbeek, & Bushman, 2014; Malkin et al., 2011), the present study suggests that positive events *per se* may be shame-inducing, as if there was a rebound-effect on daily emotions on days when experiencing higher positive events that usual. Future studies should clarify this finding: it is possible to hypothesize that other variables interfere in this association. For instance, a rebound effect may be more likely for those who feel they do not deserve positivity, or treat positive events with suspicion and incredulity.

Contrary to expectations, interactions among narcissism and situations failed to emerge at the state level. In other words, both state narcissism and situations were relevant correlates of shame, independently of any interaction effect. It is possible that when considering

momentary experiences of the self (i.e., state narcissism) and daily situations in the short-term time scale, variables may be more likely to co-occur rather than to moderate each other. On the other hand, stable dispositions are more likely to be modulated in their expression depending on the situations that one encounters.

Finally, it is of note that experiences of shame do not seem to be primarily the result of high dispositional negative affectivity, as the PID-5 dimension did not show any significant incremental association with daily shame across all models. Albeit not the main focus of the investigation, this finding confirms previous studies showing that PID-5 negative affectivity does not entirely capture vulnerable manifestations of pathological narcissism, despite meaningful overlaps (Miller, Gentile, Wilson, & Campbell, 2013; Wright et al., 2013). Indeed, vulnerable narcissism – especially (but not exclusively) in its state components – accounted for experiences of shame above and beyond negative affectivity. At the same time, findings indicated that the effect of trait vulnerable narcissism on shame was mostly absorbed by self-esteem, unequivocally emerging as a core predictor of shame in the present study (Watson et al., 1996). Self-esteem is also a key feature of general personality impairment in the newly developed alternative model for personality disorders (DSM-5, APA, 2013): in this sense, the absence of incremental effects of trait vulnerable narcissism on shame (except in situations of high social stress) may support the idea that vulnerable narcissism resembles global self-regulatory impairments in personality functioning (Miller, Gentile, et al., 2013; Wright, 2016), such as deficient feelings of self-worth. The limited focus on shame of the current study, however, suggests caution in drawing conclusions on the nature of the construct of vulnerable narcissism.

The present work can be better appreciated in light of its limitations. The study allowed for in-context daily assessment, but remains a self-report based study. The temporal resolution is high, but daily surveys are still retrospective. In a sense, these studies reduce the weight of

explicit and implicit self-concept on participants' answers (i.e., a grandiose person is more likely to admit being ashamed today, rather than being ashamed in general), but do not eliminate it completely, nor they overcome problems related to social desirability, deliberate concealment, or response styles (e.g., Baird et al., 2017). Multi-method assessment of pathological narcissism and its outcomes is therefore desirable in order to integrate different perspectives. The study also included a nonclinical sample of young adults with a restricted age range: although this reduces bias related to age cohort, it also impacts generalizability of the results, especially if one is interested in clinical individuals. The sample was also highly unbalanced in terms of gender. This composition is representative of the population of undergraduate students in psychology, and is somehow inevitable when including psychology students; however, wider and more balanced samples would allow for a better consideration of gender differences and effects.

In conclusion, the study highlights the role of shame as a *keystone affect* in pathological narcissism, both in its grandiose and vulnerable manifestations. Results offer suggestions to both clinicians and researchers. In clinical settings, the possibility of emotional experiences of shame should always be taken into account when treating narcissistic patients, regardless of their self-states and their dominant phenotypic manifestation. As shown, narcissistic grandiosity does not prevent individuals from experiencing intense feelings of shame. Thus, it is important for clinicians to empathize with the sensitivity of patients with relevant narcissistic traits, since it is known that shame-inducing situations may trigger retaliatory aggression and anger in high narcissists. At the same time, researchers should pay attention to the emotional experience of shame when studying the correlates of pathological narcissism. Even in its grandiose forms, pathological narcissism can be associated with shame, despite cross-sectional studies were not consistently able to detect it, or even suggested opposite findings.

CHAPTER VII

GENERAL DISCUSSION

7.1 A unitary glance at the three studies

In the empirical section of the present work, the relationship between pathological narcissism and shame was investigated both at the trait level and at the daily level. The three studies conducted can be conceived as a spiral, progressively leading to increasingly specific and sophisticated results on the theme. If Study 1 was an important preliminary step for a valid and reliable investigation of the narcissism-shame associations, Study 2 focused its interest on dispositional measures of pathological narcissism and shame, whereas Study 3 further digged into such associationos by considering daily shame in relation to both trait and state narcissism over a period of 28 days.

Study 1 has a number of methodological and conceptual implications. From a methodological point of view, the PFQ-2 has proven useful in assessing shame- and guilt-proneness among Italian participants. The factor structure of the measure was mostly consistent with previous research and, additionally to previous findings, demonstrated acceptable invariance across genders, suggesting good ability to assess the two constructs both in males and in females. Also, in spite of a moderate correlation between shame- and guilt-proneness – that was in line with previous findings using the PFQ-2 (Harder et al., 1992; Harder & Greenwald, 1999; Harder & Zalma, 1990; Rüsch, Corrigan, et al., 2007) – the measure also demonstrated good discriminant validity, at least after controlling for the shared variance between the two constructs. This was particularly true when the scales were correlated with external measures assessing trait or personality variables (trait guilt, character shame, and maladaptive personality domains), rather than psychological distress.

Probably more interesting for this general discussion are the conceptual implications that can be deducted from the study. These implications can be articulated in two main points: the distinction between shame- and guilt-proneness, and their relevance for psychopathology and maladaptive personality. In fact, of great interest were also the implications of gender invariance analyses, as they suggested replicability of the factors across genders, meaning that men and women described and conceptualized shame- and guilt-proneness in very similar ways. Overall, Study 1 corroborates the idea that shame- and guilt-proneness are two different constructs as they most likely refer to different emotional experiences. As discussed in Chapter I, the difference between shame and guilt has been theorized both in psychodynamic and social cognitive literature. Whereas guilt results from a perception of *harmfulness* and from a tension with an internalized set of ideal *actions*, shame is rather connected to feelings of *inadequacy* and related to a comparison with ideal *self-representations* (e.g., Lewis, 1971a; Miceli & Castelfranchi, 2018; Wurmser, 1981). In this sense, shame but not guilt appears in most accounts of pathological narcissism and identity issues, as it is generally considered a more global and pervasive affect, with greater impact on the sense of self-worth and clearer connections with the functioning of internalized ideals (e.g., ego ideal, ideal self). The possibility to empirically corroborate a distinction between shame- and guilt-proneness – both through factor analysis and assessment of external correlates – is therefore a relevant issue.

This brings to the second point, namely the correlations that emerged with psychopathology and maladaptive personality. The study showed that both shame- and guilt-proneness can be important affects in psychopathology, as they were associated with measures of psychological distress and maladaptive personality. At the same time, shame-proneness was generally more strongly related to indices of psychopathology, whereas maladaptive personality domains differentiated guilt- and shame-prone individuals. In spite of a common ground in negative affectivity – and psychoticism to a lower extent – guilt-

proneness was more related to aspects of dishinibition, whereas shame-proneness mostly co-occurred with traits of detachment. Overall, not only the study supports a distinction between the two affects, but also hints at the relevance of such affects for clinical psychologists, and particularly suggests that personality maladjustment may have specific conncetions to the two affects of shame and guilt depending on the personality configuration, even if the two emotions are both an expression of general negative affectivity (APA, 2013).

Study 2 was a correlational study exploring the relationship between narcissistic traits and shame-proneness, in a cross-sectional design and adopting an entirely dispositional perspective. Its strengths were the use of both the FFNI-SF and the B-PNI to assess trait narcissism, the width of the sample providing good statistical power, as well as the focus on specific traits in accordance with the high heterogeneity of the construct of pathological narcissism (Caligor et al., 2015; Glover et al., 2012). One of the ways to interpret findings from this study is to consider them as a picture of the way people see and describe themselves in general terms, regarding their levels of narcissism and shame-proneness. In other words, given the cross-sectional design – and net of social desirability problems – the study provides useful information on participant's self-concept relative to their dispositional narcissism and shame. When considering grandiose and vulnerable narcissism as two higher-order unitary constructs, the study unequivocally demonstrated that those who are higher in grandiose narcissism report experiencing less shame, whereas those who are higher in vulnerable narcissism report greater shame. These findings were consistent across measures of pathological narcissism, and were somehow unsurprising. Still, they can be considered as a systematization of previous findings, which appear to be sparse, either based solely on zero-order correlations (Hyatt et al., 2017; Pincus et al., 2009; Schoenleber et al., 2015), or relying on the use of controversial measures of narcissism (Freis et al., 2015; Malkin et al., 2011), or addressing only in part the relative role of grandiose and vulnerable traits (Ritter et al., 2014).

At the facet level, Study 2 suggested peculiar patterns of associations between specific narcissistic facets and shame-proneness. Aspects related to grandiose power mostly accounted for the negative association between shame-proneness and grandiose narcissism: these included overt aspects of authoritativeness and exploitation, as well as cover aspects of pseudo-altruism. What may bind together these traits is that individuals scoring high on them should be relatively able to maintain positive self-images. A positive self-view may either be based on assertiveness and leadership, or in more malignant forms on the ability to manipulate others, as well as on the tendency to act in altruistic ways only as a mean of feeling "good" and "better than others". At the same time, the tendency to indulge in grandiose fantasies – particularly overtly grandiose fantasies of power and success – was positively related to reported frequency of shame experiences.

Vulnerable aspects of self-esteem fragility, dependency on others' approval, and low trust and devaluation were found to enhance the predisposition to shame. Hence, almost all facets of vulnerable narcissism were positively related to shame-proneness, with the exception of more hostile tendencies, that were either unrelated (i.e., B-PNI entitlement rage) or negatively related (i.e., FFNI-SF reactive anger) to shame-proneness.

Study 3 complements information yielded by Study 2. It provides results on the associations between trait and state narcissism and daily shame. One way to conceive the results regarding trait narcissism is to think of them as an expression of how individuals describing themselves as more narcissist (again, at the self-concept level) *actually* experience shame in daily life. In Study 3, differently from Study 2, dispositional grandiose narcissism appears to be generally not protective for experiencing shame across days. The two scales of grandiose narcissism were either unrelated (FFNI-SF) or positively related (B-PNI) to daily experiences of shame. There are at least two elements to bear in mind when interpreting this finding. On one hand, the difference in terms of research design between Study 2 and 3. As an

intensive longitudinal study, Study 3 should, at least, favour introspection on emotional experience and reduce memory and selection bias, so that participant's daily reports should be less influenced by global self-concept issues and more in line with day-to-day variations (Reis, 2012; Schwarz, 2012). In this sense, a comparison between Study 1 and Study 2 suggests that individuals high in grandiose narcissism may report less shame in global assessments driven by self-concept, but equal or even more shame than other individuals in intensive longitudinal assessments. However, beyond having a different design, Study 2 and 3 also included different control variables. In this sense, it is important to note that they are not entirely and directly comparable. Controlling for self-esteem, for example, likely has an impact on the associations of grandiose narcissism, as it partials out its more "adaptive" components, the ones that overlap with high self-esteem (see for instance Lynam, Hoyle, & Newman, 2006; for a review on narcissism and self-esteem see Bosson et al., 2008). It is the "exceeding portion" of pathological grandiose narcissism that appeared to predict more daily shame or, at best, to be unrelated to it. Likely, for a similar reason, trait vulnerable narcissism was not uniquely related to daily shame in Study 3, despite being associated with it at the zero-order level. This suggests that low self-esteem drives vulnerable narcissists' experiences of daily shame: vulnerable narcissists may experience more shame, but this is rather due to diminished self-regard (Watson et al., 1996).

Additional facet level analyses performed in Study 3 yield very interesting results. One finding emerges quite unequivocally: grandiose fantasies predict experiences of daily shame, both as assessed by the B-PNI and the FFNI-SF, and this finding is also consistent with cross-sectional results from Study 2. This quite robust finding echoes theoretical and clinical considerations on narcissism. Psychodynamic descriptions of the grandiose self (Kernberg, 1975; Kohut, 1972), ideas on the role of maladaptive perfectionism in pathological narcissism (Ronningstam, 2011), as well as psychodynamic accounts of shame (Broucek, 1982; Lewis,

1971a; Morrison, 1983; Wurmser, 1981, 1987): all these perspectives emphasize the relevant discrepancy between a grandiose self with compensatory functions and a real self prone to shame and feelings of vulnerability. Findings indicate that grandiose fantasies increase predisposition to shame, as if shame was a by-product of a peremptory ego ideal (Wurmser, 1987) or a demanding ideal self (Morrison, 1983), backfiring into both heightened explicit shame-proneness and more frequent daily experiences of shame.

Study 3 did not confirm that authoritativeness, pseudo-altruism, or exploitative tendencies are associated with reduced shame. On the contrary, exploitativeness was even positively related to daily shame, whereas the other variables were unrelated to it. As discussed in Chapter VI, this result is in line with a study by Edershile & Wright (2019a), where dispositional antagonism showed positive associations with momentary means of both grandiose and vulnerable narcissism. In other words, antagonistic aspects – among which exploitative tendencies are usually included – predicted both daily grandiose and daily vulnerable self-states, so that the authors suggested that antagonism may drive fluctuations in pathological narcissism. Given that antagonism is a central feature of pathological narcissism (Krizan & Herlache, 2018; Miller, Lynam, McCain, et al., 2016), Edershile & Wright's (2019a) findings may indicate that fluctuations in self-states are themselves a core aspect of narcissistic pathology (see also Di Pierro et al., 2019). In this direction, Study 2 and 3 further suggest that specific aspects of antagonism, such as exploitativeness, are related to diminished shame at the trait level, but increased shame at the daily level (again, when controlling for self-esteem). In this sense, we may hypothesize that individuals high in exploitative tendencies may even experience more shame, but not "incorporate" them into their general self-concept. Exploitation may serve as a regulatory strategy for shame or, alternatively, individuals may experience shame *due to* their exploitative tendencies. The mechanism,

however, remains unclear and – compared to grandiose fantasies – the finding is more ambiguous and less clearly grounded in clinical and theoretical descriptions.

The last thoughts on facet level analyses across the two studies are related to the vulnerable facets of pathological narcissism. Findings from Study 3 do not diverge substantially from Study 2 in this regard: again, devaluation of others was found to predict daily shame. Also, more hostile aspects of vulnerable narcissism – in this case as assessed by the B-PNI (i.e., entitlement rage) – were negatively related to shame. On one hand, this confirms that hostility allows to downregulate shame (e.g., Kohut, 1972; Schoenleber & Berenbaum, 2012). On the other, both Study 2 and 3 suggest that shame is embedded within problematic interpersonal relationships. After all, as discussed in Chapter I, shame is thought to be deeply rooted in interpersonal interactions (e.g., Broucek, 1982; Dolezal, 2017; Steiner, 2011). When relationships are characterized by high expectations of others' mirroring and approval, combined with interpersonal sensitivity and avoidance, shame is likely to appear. In this sense, also ideal expectations towards others are a potential source of shame. Indeed, the devaluing dimension of the B-PNI, that predicts shame across the two studies, includes items such as 'sometimes I avoid people because I'm afraid they won't do what I want them to do', and one item also mentions feelings of shame in the context of frustrated interpersonal expectations.

Finally, Study 3 offers novel findings on the situations that increase narcissists' sensitivity to shame, as well as on state narcissism and shame. In this sense, the study digs into more dynamic processes and triggers related to shame. As discussed, higher shame is reported in relation to higher daily work load, whereas individuals high on vulnerable narcissism may also be negatively affected by socially stressful events, and positively affected by agentic and communal positive events. Regarding state narcissism, higher shame was

reported on days when participants experienced both more vulnerable and more grandiose self-states.

These findings suggest that narcissists may react with peculiar shame reactions to certain situations, especially situations with agentic content for those high in grandiose narcissism and with both agentic and communal content for those high in vulnerable narcissism. Results are essentially consistent with previous studies investigating the impact of situational variables on different outcomes, such as self-esteem (Geukes et al., 2017; Zeigler-Hill & Besser, 2013). Also, they are in line with studies indicating that both grandiose and vulnerable narcissism can be related to negative affects (Edershile et al., 2019; Thomas et al., 2012; Wright et al., 2013), despite vulnerable narcissism has stronger associations with them. Indeed, also Study 3 shows that those who scored higher on average in vulnerable narcissism across the 28 days reported more shame, whereas the same association did not emerge for grandiose narcissism (i.e., the between-person part).

7.2 Implications and conclusions

Overall, the studies reported in this section add on previous findings on pathological narcissistic functioning and related shame experiences. The three studies provide a validated version of the PFQ-2 to assess shame- (and guilt-) proneness, offering a number of empirically driven considerations on the two affects of shame and guilt and their role in psychopathology. Results inform on the nature of conscious shame-proneness in narcissists, as well as on their daily experiences of shame across multiple days.

The studies have implications both for clinicians and researchers. The findings presented in the empirical section suggest that researchers should consider shame as a potential correlate of pathological forms of narcissism, including it as an associated feature of its clinical and subclinical manifestations. Shame appears to have a specific role in narcissistic

phenomena, beyond both guilt and general negative affectivity, and above self-esteem. Shame can also be reliably distinguished from guilt, and collapsing together the two emotions may be confounding. At least, when studying self-conscious emotionality in pathological narcissism, a focus on shame may be more appropriate, for both theoretical and empirical reasons. Also, at least certain grandiose features could be considered as risk factors for co-occuring heightened shame reactions and fragile feelings of self-worth.

The three studies involved non clinical participants only, limiting the generalizability to clinical populations with NPD, or patients seeking treatment presenting relevant narcissistic themes. However, results may tentatively and cautiously inspire some concluding remarks on diagnostic and treatment issues. As stated previously in this work, shame is a clinically relevant affect: it can emerge in psychotherapy sessions and in the transference relationship, undermining therapeutic alliance and patients' propensity to report on their inner world (Levin, 1971; Lewis, 1971a): patients may feel judged, misunderstood, hypersensitive. Furthermore, shame can trigger aggressive and hostile behaviours in narcissists (Thomaes et al., 2008, 2007); also, narcissists' attempts to regulate shame can include substance abuse (Bilevicius et al., 2019), and shame is experienced to higher degrees in individuals reporting depressive symptoms, anxiety, or eating disorder features (Caretti et al., 2010; Harder et al., 1992; Velotti et al., 2017). In other words, shame can not be ignored: it has to be understood, treated, maybe even foreseen in clinical settings. With particular reference to narcissism, shame both undermines "normal" narcissistic functioning (i.e., identity, self-esteem, sense of self-worth), and is a key affect in pathological narcissistic manifestations (i.e., excessive vulnerabilities and heightened sensitivity). The studies presented here confirm an association with pathological narcissism: in a general sense, they indicate that those presenting with vulnerable narcissistic themes are likely to experience shame to a great degree, and that those presenting with grandiose themes are not necessarily sheltered from shame. In fact, they may

even experience more shame, especially when they are prone to grandiose fantasies, when they experience higher work-related responsibilities, and when their levels of narcissism are frankly maladaptive and exceed authentic positive self-esteem.

Working through shame can be complicated with patients high in grandiosity, as they may tend to deny and devalue experiences of shame and vulnerability (Ronningstam, 2010). Still, it is a peril for clinicians to be blind to shame and vulnerability in grandiose patients, at least as much as being blind to grandiose and malignant aspects is a peril for clinicians treating more vulnerable patients. Hence, it may be helpful and effective, for clinicians, to observe and investigate shame dynamics in patients presenting with narcissistic themes (Kramer et al., 2018), regardless of their self-states and their relative levels of dispositional grandiosity and vulnerability. If psychodynamic clinicians may be more interested in connecting excessive shame experiences to early parenting or grandiose internalized expectations, cognitive psychotherapists may be more likely to work on the maladaptive cognitions eliciting shame. In any case, therapies may be effective in promoting self-compassion (Kramer et al., 2018), that "*gradual acceptance of emotional reality*" (Kernberg, 2015, p. 641) that patients presenting with pathological narcissism so often fail to achieve.

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APPENDIX A

The Personal Feelings Questionnaire-2: Italian translation

Per ciascuna delle seguenti sensazioni riportate, indichi un numero da 0 a 4 che rifletta quanto ciascuna sensazione sia comune per lei.

4 = Fa esperienza di questa sensazione continuamente o quasi sempre
3 = Fa esperienza di questa sensazione frequentemente ma non di continuo
2 = Fa esperienza di questa sensazione di tanto in tanto
1 = Fa esperienza di questa sensazione molto poco
0 = Non fa mai esperienza di questa sensazione

_____1. Imbarazzo
_____2. Lieve senso di colpa
_____3. Sensazione di esser ridicolo/a
_____4. Preoccupazione di offendere o danneggiare qualcuno
_____5. Tristezza
_____6. Disagio
_____7. Sensazione di umiliazione
_____8. Intenso senso di colpa
_____9. Euforia
____10. Sensazione di essere “stupido/a”
____11. Rimpianto
____12. Sensazione di essere “infantile”
____13. Tenue gioia
____14. Sensazione di essere impotente, paralizzato/a
____15. Depressione
____16. Sensazione di arrossare
____17. Sensazione di meritare critiche per qualcosa che hai fatto
____18. Sensazione di poter esser deriso/a
____19. Rabbia
____20. Piacere, godimento
____21. Sensazione di esser disgustoso/a per gli altri
____22. Rimorso

APPENDIX B

R-code for Study 1

```
   #Loading data
   library(haven)
   DataPFQ <- data.frame(read_sav("DataPFQ.sav"))
#-------------------------------------------------------------------------------------------------#
   #SAMPLE - DESCRIPTIVE STATISTICS
   Library(psych)
   psych::describe(DataPFQ$Q5_1_Age)
     DataPFQ$Gender <- as.factor(DataPFQ$Q4_Gender)
     summary(DataPFQ$Gender)
     gender <- table(DataPFQ$Gender)
     prop.table(gender)

     DataPFQ$Education <- as.factor(DataPFQ$Education)
     summary(DataPFQ$Education)
     education <- table(DataPFQ$Education)
     prop.table(education)

     DataPFQ$StCivile <- as.factor(DataPFQ$StCivile)
     summary(DataPFQ$StCivile)
     civil <- table(DataPFQ$StCivile)
     prop.table(civil)
#-------------------------------------------------------------------------------------------------#
#DIAGNOSTICS (MULTIVARIATE NORMALITY)
   library(MVN)
   mydata <- DataPFQ[,c("PFQ_2", "PFQ_4", "PFQ_8", "PFQ_11", "PFQ_17", "PFQ_22", "PFQ_1",
      "PFQ_3", "PFQ_6", "PFQ_7", "PFQ_10", "PFQ_12", "PFQ_14", "PFQ_16", "PFQ_18", "PFQ_21")]

   #Exclude subjects with missing values
   mvndata$mis <- apply(mvndata,1,function(x) sum(is.na(x)))
   mvndata <- subset(mvndata, mvndata$mis < 1 )
   mvndata$mis <- NULL

   #Test of multivariate normality
   mvn(mvndata, mvnTest = "dh", desc = F)
#-------------------------------------------------------------------------------------------------#
#CFA - TWO-FACTOR MODEL
   library(lavaan)

   #default model – Harder & Zalma (1990)

   mdl1 <- '
   G =~ PFQ_2 + PFQ_4 + PFQ_8 + PFQ_11 + PFQ_17 + PFQ_22
   S =~ PFQ_1 +  PFQ_3 + PFQ_6  + PFQ_7 + PFQ_10 + PFQ_12 + PFQ_14 + PFQ_16 + PFQ_18 + PFQ_21
   '
   fit1 <- lavaan::cfa(model = mdl1, data = DataPFQ, estimator = "MLM", orthogonal = FALSE,
      std.lv=TRUE)
   summary(fit1, fit.measures = TRUE)  #the model does not show good fit

   #exploring modification indices
   modificationindices(fit1, sort.= TRUE, minimum.value = 3)

   #We compute new models, adding parameters based on modification indices
   #We free the covariance between PFQ11-PFQ22 (scale G): "regret"/"remorse"
   #We free the covariance between PFQ2-PFQ8 (scale G): "mild guilt"/"intense guilt"
   #We free the covariance between PFQ3-PFQ14 (scale S): "ridiculous"/"helpless/paralyzed"

   mdl2 <- '
   G =~ PFQ_2 + PFQ_4 + PFQ_8 + PFQ_11 + PFQ_17 + PFQ_22
   S =~ PFQ_1 +  PFQ_3 + PFQ_6  + PFQ_7 + PFQ_10 + PFQ_12 + PFQ_14 + PFQ_16 + PFQ_18 + PFQ_21
   PFQ_11~~PFQ_22
   PFQ_2~~PFQ_8
   PFQ_3~~PFQ_14
   '
   fit2 <- lavaan::cfa(model = mdl2, data = DataPFQ, estimator = "MLM", orthogonal = FALSE,
      std.lv=TRUE)
   summary(fit2, fit.measures = TRUE)
   parameterEstimates(fit2, standardized = TRUE)
#-------------------------------------------------------------------------------------------------#
```

```
   #CFA - ONE-FACTOR MODEL

   mdl3 <- '
   UniF =~ PFQ_1 + PFQ_2 + PFQ_3 + PFQ_4 + PFQ_6  + PFQ_7 + PFQ_8 + PFQ_10 + PFQ_11 + PFQ_12 +
      PFQ_14 + PFQ_16 + PFQ_17 + PFQ_18 +  PFQ_21 + PFQ_22
   '
   fit3 <- lavaan::cfa(model = mdl3, data = DataPFQ, estimator = "MLM", std.lv=TRUE)
   summary(fit3, fit.measures = TRUE)

   #Exploring modification indices
   modificationindices(fit3, sort.= TRUE, minimum.value = 3)

   #Model freeing covariance between PFQ2-8, PFQ11-22, PFQ3-14

   mdl4 <- '
   Unico =~ PFQ_1 + PFQ_2 + PFQ_3 + PFQ_4 + PFQ_6  + PFQ_7 + PFQ_8 + PFQ_10 + PFQ_11 + PFQ_12
      + PFQ_14 + PFQ_16 + PFQ_17 + PFQ_18 +  PFQ_21 + PFQ_22
   PFQ_2~~PFQ_8
   PFQ_11~~PFQ_22
   PFQ_3~~PFQ_14
   '
   fit4 <- lavaan::cfa(model = mdl4, data = DataPFQ, estimator = "MLM", std.lv=TRUE)
   summary(fit4, fit.measures = TRUE)

   #Comparing one- and two-factor model:
   anova(fit2, fit4)
#-------------------------------------------------------------------------------------------#
   #MEASUREMENT  INVARIANCE  ACROSS  GENDERS  FOR  THE  2-FACTOR  MODIFIED  MODEL  –  lavaan  and
   semTools

   DataPFQ <- DataPFQ[-196,] #delete missing gender

   #Invariance and modification indices with lavaan
   configural.0 <- lavaan::cfa(model = mdl2, data = DataPFQ, estimator = "MLM", orthogonal =
      FALSE, group = "Q4_Gender")
   weak.0 <- lavaan::cfa(model = mdl2, data = DataPFQ, estimator = "MLM", orthogonal = FALSE,
      group = "Q4_Gender", group.equal = "loadings")
   strong.0 <- lavaan::cfa(model = mdl2, data = DataPFQ, estimator = "MLM", orthogonal =
      FALSE, group = "Q4_Gender", group.equal = c("loadings", "intercepts"))
   strict.0 <- lavaan::cfa(model = mdl2, data = DataPFQ, estimator = "MLM", orthogonal =
      FALSE, group = "Q4_Gender", group.equal = c("loadings", "intercepts", "residuals"))

   anova(configural.0, weak.0, strong.0, strict.0)
   modificationindices(strong.0, sort = TRUE, op = "~")#may not include intercepts
   lavTestScore(strong.0, epc = T)#includes expected parameter change for intercepts

   #Allowing items 16 and 10 to have different intercepts
   configural <- lavaan::cfa(model = mdl2, data = DataPFQ, estimator = "MLM", orthogonal =
      FALSE, group = "Q4_Gender", group.partial = c("PFQ_16~1", "PFQ_10~1"))
   summary(configural, fit.measures = TRUE)

   weak <- lavaan::cfa(model = mdl2, data = DataPFQ, estimator = "MLM", orthogonal = FALSE,
      group  =  "Q4_Gender",  group.equal  =  "loadings",  group.partial  =  c("PFQ_16~1",
      "PFQ_10~1"))
   summary(weak, fit.measures = TRUE)

   strong <- lavaan::cfa(model = mdl2, data = DataPFQ, estimator = "MLM", orthogonal = FALSE,
      group  =  "Q4_Gender",  group.equal  =  c("loadings",  "intercepts"),  group.partial  =
      c("PFQ_16~1","PFQ_10~1"))
   summary(strong, fit.measures = TRUE)

   strict <- lavaan::cfa(model = mdl2, data = DataPFQ, estimator = "MLM",orthogonal = FALSE,
    group = "Q4_Gender", group.equal = c("loadings", "intercepts", "residuals"), group.partial
      = c("PFQ_16~1", "PFQ_10~1"))
   summary(strict, fit.measures = TRUE)

   anova(configural, weak, strong, strict)

   #Using semTools
   library(semTools)

   measurementInvariance(model = mdl2,estimator = "MLM", data = DataPFQ, strict = TRUE, group
      = "Q4_Gender", group.partial = c("PFQ_16~1", "PFQ_10~1"))
#-------------------------------------------------------------------------------------------#
   #CRONBACH'S ALPHAS OF SHAME- AND GUILT-PRONENESS SCALES
```

```
   #guilt scale
   alphaG <- DataPFQ[, c("PFQ_2", "PFQ_4", "PFQ_8", "PFQ_11","PFQ_17", "PFQ_22")]
   alpha(alphaG, na.rm = TRUE)

   #shame scale
   alphaS  <-  DataPFQ[,  c("PFQ_1",  "PFQ_3",  "PFQ_6",  "PFQ_7","PFQ_10",  "PFQ_12","PFQ_14",
      "PFQ_16", "PFQ_18", "PFQ_21")]
   alpha(alphaS, na.rm = TRUE)

   #DIFFERENCES IN SHAME AND GUILT
   #Gender differences
   t.test(DataPFQ$PFQ_GUILT ~ DataPFQ$Q4_Gender, var.equal = TRUE)
   t.test(DataPFQ$PFQ_SHAME ~ DataPFQ$Q4_Gender, var.equal = TRUE)

   #Differences in shame and guilt (total score divided by n. of items)
   meanG <- mean(DataPFQ$PFQ_GUILT_PON, na.rm = TRUE)
   t.test(DataPFQ$PFQ_SHAME_PON, mu = meanG)
#-------------------------------------------------------------------------------------------#
   #CORRELATIONS WITH EXTERNAL MEASURES
   #create subset for correlations
   Correlation    <-DataPFQ[,c("PFQ_SHAME",    "PFQ_GUILT",    "ESS_CHARACTER",    "GI_TRAIT",
      "PID_NEGAFF",   "PID_DETACH",   "PID_ANTAG",   "PID_DISHIN",   "PID_PSY",   "SCL_SOMAT",
      "SCL_OCD", "SCL_SENIN", "SCL_DEPRE", "SCL_ANSIA", "SCL_OSTRA", "SCL_ANFOB", "SCL_IDPAR",
      "SCL_PSICO", "SCL_ALTRI", "SCL_TOT")]

   #Select cases without missing values
   Correlation$mis <- apply(Correlation,1,function(x) sum(is.na(x)))
   summary(Correlation$mis)
   Correlation2 <- subset(Correlation, Correlation$mis < 1 )
   Correlation2$mis <- NULL

   #Zero-order correlations
   library (psych)
   corr.test(Correlation2, use = "complete")

   #Correlations of shame partialling for guilt
   corShame <- partial.r(Correlation2,c(1,3:20), 2)
   corr.p(corShame, 357-1)

   #Correlations of guilt partialling for shame
   corGuilt <- partial.r(Correlation2, c(2:20), 1)
   corr.p(corGuilt, 357-1)

   #general syntax to test the difference between two correlations
   #paired.r(xy, xz, yz = NULL, n, n2 = NULL, twotailed = TRUE)
   #If the correlations are not independent then r(yz) must be specified
   #e.g., r.partial(ESS_CHARACTER; PFQ-Shame) vs r.partial(ESS_CHARACTER; PFQ-Guilt)

   paired.r(.40, .25, .54, 357,twotailed=TRUE)
#-------------------------------------------------------------------------------------------#
   #ICC3,1 FOR TEST-RETEST RELIABILITY
   library(psych)
   DataICC_S <- DataPFQ[(DataPFQ$Retest == 1),c("PFQ_SHAME", "PFQ_SHAME_Retest")]
   ICC(DataICC_S)
   DataICC_G <- DataPFQ[(DataPFQ$Retest == 1),c("PFQ_GUILT", "PFQ_GUILT_Retest")]
   ICC(DataICC_G)
```

APPENDIX C

R-code for Study 2

```
   setwd("G:/Il mio Drive/PhD/Marco&Rossella/PFQ-2/DatiValidazione")

   library(haven)
   data <- data.frame(read_sav("DataPFQ.sav"))
   View(data)

   library(psych)
   library(sjPlot)
   library(gvlma)
   library(car)
   library(rcompanion)
#-------------------------------------------------------------------------------------------#
   #CRONBACH'S ALPHAS FOR FFNI AND FOR LOWER-ORDER SCALES
   #BPNI Facets: SSSE
   PNISSSE <- data[, c("BPNI_10", "BPNI_12", "BPNI_19", "BPNI_24")]
   alphaPNISSSE <- psych::alpha(PNISSSE, na.rm = TRUE)
   alphaPNISSSE$total$raw_alpha
   #BPNI Facets: GF
   PNIGF <- data[, c("BPNI_13", "BPNI_17", "BPNI_25", "BPNI_26")]
   alphaPNIGF <- psych::alpha(PNIGF, na.rm = TRUE)
   alphaPNIGF$total$raw_alpha
   #BPNI Facets: EXP
   PNIEXP <- data[, c("BPNI_1", "BPNI_4", "BPNI_6", "BPNI_11")]
   alphaPNIEXP <- psych::alpha(PNIEXP, na.rm = TRUE)
   alphaPNIEXP$total$raw_alpha
   #BPNI Facets: DEV
   PNIDEV <- data[, c("BPNI_7", "BPNI_9", "BPNI_14", "BPNI_20")]
   alphaPNIDEV <- psych::alpha(PNIDEV, na.rm = TRUE)
   alphaPNIDEV$total$raw_alpha
   #BPNI Facets: HS
   PNIHS <- data[, c("BPNI_3", "BPNI_15", "BPNI_27", "BPNI_28")]
   alphaPNIHS <- psych::alpha(PNIHS, na.rm = TRUE)
   alphaPNIHS$total$raw_alpha
   #BPNI Facets: CSE
   PNICSE <- data[, c("BPNI_2", "BPNI_16", "BPNI_18", "BPNI_21")]
   alphaPNICSE <- psych::alpha(PNICSE, na.rm = TRUE)
   alphaPNICSE$total$raw_alpha
   #BPNI Facets: ER
   PNIER <- data[, c("BPNI_5", "BPNI_8", "BPNI_22", "BPNI_23")]
   alphaPNIER <- psych::alpha(PNIER, na.rm = TRUE)
   alphaPNIER$total$raw_alpha

#FFNI-grandiosity
   itemsGNFF <- data[, c("FFNI_1", "FFNI_16", "FFNI_31", "FFNI_46", "FFNI_2", "FFNI_17",
      "FFNI_32", "FFNI_47", "FFNI_3", "FFNI_18", "FFNI_33", "FFNI_48", "FFNI_9", "FFNI_24",
      "FFNI_39", "FFNI_54", "FFNI_6", "FFNI_21", "FFNI_36", "FFNI_51", "FFNI_8", "FFNI_23",
      "FFNI_38R", "FFNI_53", "FFNI_11", "FFNI_26", "FFNI_41", "FFNI_56", "FFNI_7", "FFNI_22",
      "FFNI_37", "FFNI_52", "FFNI_5", "FFNI_20", "FFNI_35", "FFNI_50", "FFNI_10", "FFNI_25",
      "FFNI_40", "FFNI_55", "FFNI_15","FFNI_30","FFNI_45","FFNI_60")]
   alphaGNFF <- psych::alpha(itemsGNFF, na.rm = TRUE)
alphaGNFF$total$raw_alpha

#FFNI-vulnerabilty
   itemsVNFF <- data[, c("FFNI_13", "FFNI_28", "FFNI_43", "FFNI_58", "FFNI_14", "FFNI_29",
      "FFNI_44", "FFNI_59", "FFNI_12", "FFNI_27R", "FFNI_42", "FFNI_57", "FFNI_4", "FFNI_19R",
      "FFNI_34", "FFNI_49")]
   alphaVNFF <- psych::alpha(itemsVNFF, na.rm = TRUE)
alphaVNFF$total$raw_alpha

#FFNI FACETS: Acclaim seeking
   itemsAS <- data[, c("FFNI_1", "FFNI_16", "FFNI_31", "FFNI_46")]
   alphaAS <- psych::alpha(itemsAS, na.rm = TRUE)
   alphaAS$total$raw_alpha
#FFNI FACETS: Arrogance
   itemsArr <- data[, c("FFNI_2", "FFNI_17", "FFNI_32", "FFNI_47")]
   alphaArr <- psych::alpha(itemsArr, na.rm = TRUE)
   alphaArr$total$raw_alpha
#FFNI FACETS: Authotitativeness
```

```
   itemsAut <- data[, c("FFNI_3", "FFNI_18", "FFNI_33","FFNI_48")]
   alphaAut <- psych::alpha(itemsAut, na.rm = TRUE)
   alphaAut$total$raw_alpha
#FFNI FACETS: Distrust
   itemsDis <- data[, c("FFNI_4","FFNI_19R","FFNI_34","FFNI_49")]
   alphaDis <- psych::alpha(itemsDis, na.rm = TRUE)
   alphaDis$total$raw_alpha
#FFNI FACETS: Entitlement
   itemsEnt <- data[, c("FFNI_5", "FFNI_20", "FFNI_35", "FFNI_50")]
   alphaEnt <- psych::alpha(itemsEnt, na.rm = TRUE)
   alphaEnt$total$raw_alpha
#FFNI FACETS: Exhibitionism
   itemsExh <- data[, c("FFNI_6", "FFNI_21", "FFNI_36", "FFNI_51")]
   alphaExh <- psych::alpha(itemsExh, na.rm = TRUE)
   alphaExh$total$raw_alpha
#FFNI FACETS: Exploitativeness
   itemsExp <- data[, c("FFNI_7", "FFNI_22", "FFNI_37", "FFNI_52")]
   alphaExp <- psych::alpha(itemsExp, na.rm = TRUE)
   alphaExp$total$raw_alpha
#FFNI FACETS: Grandiose Fantasies
   itemsGF <- data[, c("FFNI_8", "FFNI_23", "FFNI_38R", "FFNI_53")]
   alphaGF <- psych::alpha(itemsGF, na.rm = TRUE)
   alphaGF$total$raw_alpha
#FFNI FACETS: Indifference
   itemsInd <- data[, c("FFNI_9", "FFNI_24", "FFNI_39", "FFNI_54")]
   alphaInd <- psych::alpha(itemsInd, na.rm = TRUE)
   alphaInd$total$raw_alpha
#FFNI FACETS: Lack of Empathy
   itemsEmp <- data[, c("FFNI_10", "FFNI_25", "FFNI_40", "FFNI_55")]
   alphaEmp <- psych::alpha(itemsEmp, na.rm = TRUE)
   alphaEmp$total$raw_alpha
#FFNI FACETS: Manipulativeness
   itemsMan <- data[, c("FFNI_11", "FFNI_26", "FFNI_41", "FFNI_56")]
   alphaMan <- psych::alpha(itemsMan, na.rm = TRUE)
   alphaMan$total$raw_alpha
#FFNI FACETS: Need for Admiration
   itemsNA <- data[, c("FFNI_12", "FFNI_27R", "FFNI_42", "FFNI_57")]
   alphaNA <- psych::alpha(itemsNA, na.rm = TRUE)
   alphaNA$total$raw_alpha
#FFNI FACETS: Reactive Anger
   itemsRA <- data[, c("FFNI_13", "FFNI_28", "FFNI_43", "FFNI_58")]
   alphaRA <- psych::alpha(itemsRA, na.rm = TRUE)
   alphaRA$total$raw_alpha
#FFNI FACETS: Thrill Seeking
   itemsTS <- data[, c("FFNI_15", "FFNI_30", "FFNI_45", "FFNI_60")]
   alphaTS <- psych::alpha(itemsTS, na.rm = TRUE)
   alphaTS$total$raw_alpha
#FFNI FACETS: Shame
   itemsFFShame <- data[, c("FFNI_14", "FFNI_29", "FFNI_44", "FFNI_59")]
   alphaFFShame <- psych::alpha(itemsFFShame, na.rm = TRUE)
   alphaFFShame$total$raw_alpha
#-------------------------------------------------------------------------------------------#
#ZERO ORDER CORRELATIONS

   correlation   <-   data[,   c("FFNI_VN","FFNI_GN",   "BPNI_NV",   "BPNI_NG",   "PFQ_SHAME",
      "PFQ_GUILT", "Q5_1_Age")]
   cor <- psych::corr.test(correlation, adjust = "none", method = "spearman")
   View(cor$p)
   sjPlot::tab_df(cor$r, digits = 2, file = "cor.html")
#-------------------------------------------------------------------------------------------#
#MULTIPLE REGRESSIONS
   data$age <- data$Q5_1_Age

#NV and NG
fit0 <- lm(PFQ_SHAME ~ Gender + age + PFQ_GUILT + FFNI_GN + FFNI_VN, data = data)
   plot(fit0)
   res0 <- residuals(fit0)
   shapiro.test(res0) #non normal residuals
   gvmodel0 <- gvlma(fit0)
   summary(gvmodel0)  #assumptions not met

#square-root transformation and standardization
   data$sqrshame <- scale(sqrt(data$PFQ_SHAME))
   data$sqrFFGN <- scale(sqrt(data$FFNI_GN))
   data$sqrFFVN <- scale(sqrt(data$FFNI_VN))
```

```
   data$sqrguilt <- scale(sqrt(data$PFQ_GUILT))
   data$sqrPNIGN <- scale(sqrt(data$BPNI_NG))
   data$sqrPNIVN <- scale(sqrt(data$BPNI_NV))
#standardazing age and gender
   data$zgender <- scale(data$Q4_Gender)
   data$zage <- scale(data$age)

#FFNI-SF
fit1 <- lm(sqrshame ~ zgender + zage + sqrguilt + sqrFFGN + sqrFFVN, data = data)
   gvmodel1 <- gvlma(fit1)
   summary(gvmodel1) #all assumptions are met
   car::vif(fit1)    #no vif values higher than 1.4
summary(fit1)
sjPlot::tab_df(round(summary(fit1)$coefficients, digits = 2), file = "fit1.html")

#B-PNI
fit2 <- lm(sqrshame ~ zgender + zage + sqrguilt + sqrPNIGN + sqrPNIVN, data = data)
   gvmodel1 <- gvlma(fit2)
   summary(gvmodel2) #all assumptions are met
summary(fit2)
sjPlot::tab_df(round(summary(fit2)$coefficients, digits = 2), file = "fit2.html")

#FFNI-SF FACETS
data$sqraccseek <- scale(sqrt(data$FFNI_AcclaimSeeking))
data$sqrarr <- scale(sqrt(data$FFNI_Arrogance))
data$sqrauth <- scale(sqrt(data$FFNI_Authoritativeness))
data$sqrdist <- scale(sqrt(data$FFNI_Distrust))
data$sqrentitl <- scale(sqrt(data$FFNI_Entitlement))
data$sqrexhi <- scale(sqrt(data$FFNI_Exhibitionism))
data$sqrexpl <- scale(sqrt(data$FFNI_Exploitativeness))
data$sqrgrandf <- scale(sqrt(data$FFNI_GrandioseFantasies))
data$sqrindiff <- scale(sqrt(data$FFNI_Indifference))
data$sqrlackem <- scale(sqrt(data$FFNI_LackEmpathy))
data$sqrmanip <- scale(sqrt(data$FFNI_Manipulativeness))
data$sqrneedadm <- scale(sqrt(data$FFNI_NeedAdmiration))
data$sqrreacang <- scale(sqrt(data$FFNI_ReactiveAnger))
data$sqrthrilseek <- scale(sqrt(data$FFNI_ThrillSeeking))
data$sqrsha <- scale(sqrt(data$FFNI_Shame))

fit3 <- lm(sqrshame ~ zgender + zage + sqrguilt + sqraccseek + sqrarr + sqrauth + sqrentitl +
   sqrexhi + sqrexpl + sqrgrandf + sqrindiff + sqrlackem + sqrmanip + sqrthrilseek +
   sqrreacang + sqrdist + sqrneedadm + sqrsha, data = data)

   gvmodel3 <- gvlma(fit3)
   summary(gvmodel3)
summary(fit3)
sjPlot::tab_df(round(summary(fit3)$coefficients, digits = 2), file = "fit3.html")

#B-PNI FACETS
data$sqrSSSE <- scale(sqrt(data$BPNI_SSSE))
data$sqrGF <- scale(sqrt(data$BPNI_GF))
data$sqrEXP <- scale(sqrt(data$BPNI_EXP))
data$sqrHS <- scale(sqrt(data$BPNI_HS))
data$sqrDEV <- scale(sqrt(data$BPNI_DEV))
data$sqrER <- scale(sqrt(data$BPNI_ER))
data$sqrCSE <- scale(sqrt(data$BPNI_CSE))

fit4 <- lm(sqrshame ~ zgender + zage + sqrguilt + sqrCSE + sqrER + sqrDEV + sqrHS + sqrEXP +
   sqrGF +  sqrSSSE, data = data)

   gvmodel4 <- gvlma(fit4)
   summary(gvmodel4)
summary(fit4)
sjPlot::tab_df(round(summary(fit4)$coefficients, digits = 2), file = "fit4.html")
```

APPENDIX D

R-code for Study 3

```
#CONTENTS:
   #Packages and data loading
   #Preparing variables
   #Plot of shame and log-transformation
   #Level 2 consistency estimates (Cronbach's alphas)
   #Zero-order correlations
   #Level 1 ICCs
   #Level 1 within and between reliability estimates
   #Test of the effect of time/day
   #Multilevel models with narcissism and shame
   #Trait narcissism and daily shame
   #Daily narcissism and daily shame
   #Models including interactions with situations
   #Daily situations*trait narcissism
   #Daily situations*daily narcissism
#Additional analyses
   #Model with B-PNI facets
   #Model with FFNI-SF facets
   #Cronbach's alphas for lower-order scales
   #Models with log-transformed daily shame
#-------------------------------------------------------------------------------------------#
#PACKAGES AND DATA LOADING

   library(lme4)             #multilevel models
   library(lmerTest)         #p-values
   library(psych)            #correlations and alphas
   library(MplusAutomation) #consistency estimates of Level 1 variables
   library(abind)            #consistency estimates of Level 1 variables
   library(sjPlot)           #tables and plots
   library(ggplot2)          #plots
   library(sjmisc)           #plots
   library(rcompanion)       #distribution plot
   library(reghelper)        #simple-slope analyses

#load dataset (long format)
   setwd("G:/Il mio Drive/Marco&Rossella/EMA - Daily diary/Paper")
   data <- data.frame(read.csv("data.csv"))

#obtain baseline dataset (wide format)
   data.b0 <- data[, (1:193)]
   data.b <- subset(data.b0, subset = duplicated(data.b0$mail) == FALSE)
#-------------------------------------------------------------------------------------------#
#PREPARING VARIABLES
 data$DailyShame <- as.numeric(data$DailyShame)
 data$dayN <- as.numeric(data$day) - 1
#Centering Level 2 variables on sample mean
 data$BPNI_VN.c <- data$BPNI_VN - mean(data.b$BPNI_VN)
 data$BPNI_GN.c <- data$BPNI_GN - mean(data.b$BPNI_GN)
 data$PID_negaff.c <- data$PID_negaff - mean(data.b$PID_negaff)
 data$TraitEsteem.c <- data$TraitEsteem - mean(data.b$TraitEsteem)
 data$FFNI_VN.c <- data$FFNI_VN - mean(data.b$FFNI_VN)
 data$FFNI_GN.c <- data$FFNI_GN - mean(data.b$FFNI_GN)
#Disaggregating between- & within-person part of Level 1 predictors
#disaggregate and center daily vulnerable narcissism
 data$DailyVN.pm <- ave(data$DailyVN, data$mail)          #mean daily VN for each particpant
 data$DailyVN.wpc <- data$DailyVN - data$DailyVN.pm       #within-person part
 DailyVN.pm.wide <- aggregate(DailyVN ~ mail, data, mean) #mean daily VN for each participant
 DailyVN.pm.mean <- mean(DailyVN.pm.wide$DailyVN)         #mean of participants' daily means
 data$DailyVN.bpc <- data$DailyVN.pm - DailyVN.pm.mean    #between-person part
#disaggregate and center daily grandiose narcsissim
 data$DailyGN.pm <- ave(data$DailyGN, data$mail)
 data$DailyGN.wpc <- data$DailyGN - data$DailyGN.pm
 DailyGN.pm.wide <- aggregate(DailyGN ~ mail, data, mean)
 DailyGN.pm.mean <- mean(DailyGN.pm.wide$DailyGN)
 data$DailyGN.bpc <- data$DailyGN.pm - DailyGN.pm.mean
#disaggregate and center daily self-esteem
 data$DailyEsteem.pm <- ave(data$DailyEsteem, data$mail)
 data$DailyEsteem.wpc <- data$DailyEsteem - data$DailyEsteem.pm
```

```
 DailyEsteem.pm.wide <- aggregate(DailyEsteem ~ mail, data, mean)
 DailyEsteem.pm.mean <- mean(DailyEsteem.pm.wide$DailyEsteem)
 data$DailyEsteem.bpc <- data$DailyEsteem.pm - DailyEsteem.pm.mean
#disaggregate and center daily social stress
 data$SocStress.pm <- ave(data$DailySocStress, data$mail)
 data$SocStress.wpc <- data$DailySocStress - data$SocStress.pm
 SocStress.pm.wide <- aggregate(DailySocStress ~ mail, data, mean)
 SocStress.pm.mean <- mean(SocStress.pm.wide$DailySocStress)
 data$SocStress.bpc <- data$SocStress.pm - SocStress.pm.mean
#disaggregate and center daily work load
 data$WorkLoad.pm <- ave(data$DailyWorkLoad, data$mail)
 data$WorkLoad.wpc <- data$DailyWorkLoad - data$WorkLoad.pm
 WorkLoad.pm.wide <- aggregate(DailyWorkLoad ~ mail, data, mean)
 WorkLoad.pm.mean <- mean(WorkLoad.pm.wide$DailyWorkLoad)
 data$WorkLoad.bpc <- data$WorkLoad.pm - WorkLoad.pm.mean
#disaggregate and center daily positive events
 data$PosEvent.pm <- ave(data$DailyPosEvent, data$mail)
 data$PosEvent.wpc <- data$DailyPosEvent - data$PosEvent.pm
 PosEvent.pm.wide <- aggregate(DailyPosEvent ~ mail, data, mean)
 PosEvent.pm.mean <- mean(PosEvent.pm.wide$DailyPosEvent)
 data$PosEvent.bpc <- data$PosEvent.pm - PosEvent.pm.mean
#-------------------------------------------------------------------------------------------------#
#Plot of shame
 describe(data$DailyShame)
 plotNormalHistogram(data$DailyShame)

 data$logDshame <- log(data$DailyShame + 1)
 describe(data$logDshame)
 plotNormalHistogram(data$logDshame)
#-------------------------------------------------------------------------------------------------#
#LEVEL 2 VARIBLES: CONSISTENCY ESTIMATES [psych::]

#Select BPNI-grandiosity items
itemsGNPNI  <-  data.b[,  c("BPNI_13",  "BPNI_17",  "BPNI_25",  "BPNI_26",  "BPNI_1",    "BPNI_4",
   "BPNI_6", "BPNI_11", "BPNI_10", "BPNI_12", "BPNI_19","BPNI_24")]

#Select BPNI-vulnerability items
itemsVNPNI <- data.b[, c("BPNI_3","BPNI_15","BPNI_27","BPNI_28","BPNI_7", "BPNI_9", "BPNI_14",
   "BPNI_20",  "BPNI_5",  "BPNI_8",  "BPNI_22",  "BPNI_23",  "BPNI_2",  "BPNI_16",  "BPNI_18",
   "BPNI_21")]

#Select FFNI-grandiosity items
itemsGNFFNI  <-  data.b[,  c("FFNI_9",  "FFNI_24",  "FFNI_39",  "FFNI_54",  "FFNI_6",  "FFNI_21",
   "FFNI_36",  "FFNI_51",  "FFNI_3",  "FFNI_18",  "FFNI_33",  "FFNI_48",  "FFNI_8",  "FFNI_23",
   "FFNI_38R",  "FFNI_53",  "FFNI_11",  "FFNI_26",  "FFNI_41",  "FFNI_56",  "FFNI_7",  "FFNI_22",
   "FFNI_37",  "FFNI_52",  "FFNI_5",  "FFNI_20",  "FFNI_35",  "FFNI_50",  "FFNI_10",  "FFNI_25",
   "FFNI_40",  "FFNI_55",  "FFNI_2",  "FFNI_17",  "FFNI_32",  "FFNI_47",  "FFNI_1",  "FFNI_16",
   "FFNI_31", "FFNI_46", "FFNI_15", "FFNI_30", "FFNI_45", "FFNI_60")]

#Select FFNI-vulnerability items
itemsVNFFNI  <-  data.b[,  c("FFNI_13",  "FFNI_28",  "FFNI_43",  "FFNI_58",  "FFNI_14",  "FFNI_29",
   "FFNI_44",  "FFNI_59",  "FFNI_12",  "FFNI_27R",  "FFNI_42",  "FFNI_57",  "FFNI_4",  "FFNI_19R",
   "FFNI_34",  "FFNI_49")]

#Select PFQ-Shame items
itemsS  <-  data.b[,  c("PFQ_1",  "PFQ_3",  "PFQ_6",  "PFQ_7",  "PFQ_10",  "PFQ_12",  "PFQ_14",
   "PFQ_16", "PFQ_18", "PFQ_21")]

#Select PID-5 negative affect (domain) items
itemsPIDna  <-  data.b[,  c("PIDNA_1",  "PIDNA_2",  "PIDNA_3",  "PIDNA_4",  "PIDNA_5",    "PIDNA_6",
   "PIDNA_7",    "PIDNA_8",    "PIDNA_9",    "PIDNA_10",    "PIDNA_11R",    "PIDNA_12",    "PIDNA_13",
   "PIDNA_14",     "PIDNA_15",     "PIDNA_16","PIDNA_17","PIDNA_18",     "PIDNA_19",     "PIDNA_20",
   "PIDNA_21", "PIDNA_22", "PIDNA_23")]

#Select RSES global self-esteem items
itemsRSES  <-  data.b[,  c("RSES_1",  "RSES_2",  "RSES_3R",  "RSES_4",  "RSES_5R",    "RSES_6",
   "RSES_7", "RSES_8R", "RSES_9R", "RSES_10R")]

#Compute alphas
 alpGNPNI <- psych::alpha(itemsGNPNI, na.rm = TRUE)
 alpVNPNI <- psych::alpha(itemsVNPNI, na.rm = TRUE)
 alpGNFFNI <- psych::alpha(itemsGNFFNI, na.rm = TRUE)
 alpVNFFNI <- psych::alpha(itemsVNFFNI, na.rm = TRUE)
 alpS <- psych::alpha(itemsS, na.rm = TRUE)
 alpPIDna <- psych::alpha(itemsPIDna, na.rm = TRUE)
```

```
 alpRSES <- psych::alpha(itemsRSES, na.rm = TRUE)
  #see alphas
   alpGNPNI$total$raw_alpha
   alpVNPNI$total$raw_alpha
   alpGNFFNI$total$raw_alpha
   alpVNFFNI$total$raw_alpha
   alpS$total$raw_alpha
   alpPIDna$total$raw_alpha
   alpRSES$total$raw_alpha
#-------------------------------------------------------------------------------------------#
#ZERO ORDER CORRELATIONS BETWEEN LEVEL 2 AND AGGREGATED (mean) LEVEL 1 VARIABLES
 #person mean of Level 1 shame
  data$DailyShame.pm <- ave(data$DailyShame, data$mail)

#subset for correlations (long format)
data.2 <- data[, c("mail", "Age", "FFNI_VN", "BPNI_VN", "FFNI_GN", "BPNI_GN","TraitShame",
   "PID_negaff", "TraitEsteem", "DailyVN.pm","DailyGN.pm", "DailyEsteem.pm","DailyShame.pm",
   "SocStress.pm", "PosEvent.pm", "WorkLoad.pm")]

#subset for correlations (wide format)
correlation <- subset(data.2, subset = duplicated(data.2$mail) == FALSE)
correlation$mail = NULL

#Correlations and p-values
cor <- psych::corr.test(correlation, use = "complete", adjust = "none")
View(cor$r)
View(cor$p)
#-------------------------------------------------------------------------------------------#
#LEVEL 1 ICCs

#Intercept-only model - DailyShame
model.0 <- "DailyShame ~ 1 + (1|mail)"
fit.0 <- lmer(model.0, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
#computing ICC of model.0
 random.varDS <- as.data.frame(VarCorr(fit.0))
 (icc <- random.varDS$vcov[1]/(random.varDS$vcov[1]+random.varDS$vcov[2]))   # compute ICC

#Intercept-only model - DailyVN
model.VN <- "DailyVN ~ 1 + (1|mail)"
fit.VN <- lmer(model.VN, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
#computing ICC of model.VN
 random.varVN <- as.data.frame(VarCorr(fit.VN))
 (icc <- random.varVN$vcov[1]/(random.varVN$vcov[1]+random.varVN$vcov[2]))

#Intercept-only model - DailyGN
model.GN <- "DailyGN ~ 1 + (1|mail)"
fit.GN <- lmer(model.GN, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
#computing ICC of model.GN
 random.varGN <- as.data.frame(VarCorr(fit.GN))
 (icc <- random.varGN$vcov[1]/(random.varGN$vcov[1]+random.varGN$vcov[2]))

#Intercept-only model - DailyEsteem
model.DE <- "DailyEsteem ~ 1 + (1|mail)"
fit.DE <- lmer(model.DE, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
#computing ICC of model.DE
 random.varDE <- as.data.frame(VarCorr(fit.DE))
 (icc <- random.varDE$vcov[1]/(random.varDE$vcov[1]+random.varDE$vcov[2]))

#Intercept-only model - DailySocStress
model.SS <- "DailySocStress ~ 1 + (1|mail)"
fit.SS <- lmer(model.SS, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
#computing ICC of model.SS
 random.varSS <- as.data.frame(VarCorr(fit.SS))
 (icc <- random.varSS$vcov[1]/(random.varSS$vcov[1]+random.varSS$vcov[2]))

#Intercept-only model - DailyWordLoad
model.WL <- "DailyWorkLoad ~ 1 + (1|mail)"
fit.WL <- lmer(model.WL, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
#computing ICC of model.WL
```

```
 random.varWL <- as.data.frame(VarCorr(fit.WL))
 (icc <- random.varWL$vcov[1]/(random.varWL$vcov[1]+random.varWL$vcov[2]))

#Intercept-only model - DailyPosEvent
model.PE <- "DailyPosEvent ~ 1 + (1|mail)"
fit.PE <- lmer(model.PE, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
#computing ICC of model.PE
 random.varPE <- as.data.frame(VarCorr(fit.PE))
 (icc <- random.varPE$vcov[1]/(random.varPE$vcov[1]+random.varPE$vcov[2]))
#-------------------------------------------------------------------------------------------#
#LEVEL 1 WITHIN AND BETWEEN RELIABILITY ESTIMATES
 #Install Mplus and run the Script "Multilevel alpha 2". Then  run multi.rel(alphaX)
 #alphaX is an dataframe with the items of interest
#-------------------------------------------------------------------------------------------#
#TEST OF THE EFFECT OF TIME/DAY

#Intercept-only model
model.0 <- "DailyShame ~ 1 + (1|mail)"
fit.0 <- lmer(model.0, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
#Random-intercept model with fixed effect of day
model.0a <- "DailyShame ~ 1 + dayN + (1|mail)"
fit.0a <- lmer(model.0a, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
#Random-slope model with random effect of day (random slope uncorrelated with intercept)
model.0b <- "DailyShame ~ 1 + dayN + (1|mail) + (0 + dayN|mail)"
fit.0b <- lmer(model.0b, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
#Random-slope model with random effect of day (random slope correlated with intercept)
model.0c <- "DailyShame ~ 1 + dayN + (1 + dayN|mail)"
fit.0c <- lmer(model.0c, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
#comparing the models
 anova(fit.0, fit.0a, fit.0b, fit.0c)
#-------------------------------------------------------------------------------------------#
#MULTILEVEL MODELS WITH NARCISSISM AND SHAME

#TRAIT NARCISSISM AND DAILY SHAME. Controls: trait neg.affect, time, trait self-esteem

#[BPNI]Random-intercept model with level 2 predictors
model.1a <- "DailyShame ~ dayN + BPNI_GN.c + BPNI_VN.c + PID_negaff.c + TraitEsteem.c + (1 +
   dayN|mail)"
fit.1a <- lmer(model.1a, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.1a)
sjPlot::tab_df(round(summary(fit.1a)$coefficients, digits = 2), file = "fit1a.html")

#[FFNI]Random-intercept model with level 2 predictors
model.1a.2 <- "DailyShame ~ dayN + FFNI_GN.c + FFNI_VN.c + PID_negaff.c + TraitEsteem.c + (1 +
   dayN|mail)"
fit.1a.2 <- lmer(model.1a.2, data, REML = FALSE,
                 control = lmerControl(optimizer = "bobyqa", optCtrl=list(maxfun=2e5)))
summary(fit.1a.2)
sjPlot::tab_df(round(summary(fit.1a.2)$coefficients, digits = 2), file = "fit1a2.html")

#DAILY NARCISSISM AND DAILY SHAME. Controls: trait neg.affect, time, state self-esteem

#Random-slope model with level 1 predictors:
model.1b <- "DailyShame ~ dayN + DailyVN.wpc + DailyVN.bpc + DailyGN.wpc + DailyGN.bpc +
   DailyEsteem.wpc + DailyEsteem.bpc + PID_negaff.c + (0 + dayN|mail) + (1 + DailyVN.wpc +
   DailyGN.wpc + DailyEsteem.wpc|mail)"
fit.1b <- lmer(model.1b, data = data, REML = FALSE, control = lmerControl(optimizer =
   "bobyqa", optCtrl=list(maxfun=2e5)))
summary(fit.1b)
sjPlot::tab_df(round(summary(fit.1b)$coefficients, digits = 2), file = "fit1b.html")
#-------------------------------------------------------------------------------------------#
#MODELS INCLUDING INTERACTIONS WITH SITUATIONS

#DAILY SITUATIONS*TRAIT NARCISSISM - Cross-level interaction

#[BPNI]Interaction with Level 1 social stress
model.3a <- "DailyShame ~ dayN + BPNI_GN.c*SocStress.wpc + BPNI_VN.c*SocStress.wpc +
   SocStress.bpc + TraitEsteem.c + PID_negaff.c + (1 + SocStress.wpc + dayN|mail)"
```

```
fit.3a <- lmer(model.3a, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.3a)
sjPlot::tab_df(round(summary(fit.3a)$coefficients, digits = 2), file = "fit3a.html")

#[FFNI]Interaction with Level 1 social stress
model.3a.2 <- "DailyShame ~ dayN + FFNI_GN.c*SocStress.wpc + FFNI_VN.c*SocStress.wpc +
   SocStress.bpc + TraitEsteem.c + PID_negaff.c + (1 + SocStress.wpc + dayN|mail)"
fit.3a.2 <- lmer(model.3a.2, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.3a.2)

sjPlot::tab_df(round(summary(fit.3a.2)$coefficients, digits = 2), file = "fit3a2.html")

p <- plot_model(fit.3a.2, title = "", line.size = 0.7, legend.title = "Social Stress (within-
   person)", axis.title = c("FFNI-SF vulnerable narcissism (centered)", "Daily Shame"), type =
   "int", mdrt.values = "meansd", colors = c("grey80","grey50","grey20"), ci.lvl = NA,
   pred.type = "re", axis.lim = c(1,10))
pp <- p[[2]] + set_theme(base = theme_bw(), panel.gridcol = "white", legend.pos = "bottom",
   axis.textcolor.x = "black", axis.textcolor.y = "black", axis.title.color = "black",
   legend.size = 0.7, legend.title.face = NULL)
pp[["data"]][["group"]] <- factor(c("-1 SD", "M", "+1 SD"), levels = c("-1 SD", "M", "+1 SD"))
pp

reghelper::simple_slopes(fit.3a.2) #simple slope analysis

#[BPNI]Interaction with Level 1 work Load
model.3a.3 <- "DailyShame ~ dayN + BPNI_GN.c*WorkLoad.wpc + BPNI_VN.c*WorkLoad.wpc +
   WorkLoad.bpc + TraitEsteem.c + PID_negaff.c + (1 + WorkLoad.wpc + dayN|mail)"
fit.3a.3 <- lmer(model.3a.3, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.3a.3)
sjPlot::tab_df(round(summary(fit.3a.3)$coefficients, digits = 2), file = "fit3a3.html")

p2 <- plot_model(fit.3a.3, title = "", line.size = 0.7, legend.title = "Work Load (within-
   person)", axis.title = c("B-PNI vulnerable narcissism (centered)", "Daily Shame"), type =
   "int", mdrt.values = "meansd", colors = c("grey80","grey50","grey20"), ci.lvl = NA,
   pred.type = "re", axis.lim = c(1,10))
pp2 <- p2[[2]] + set_theme(base = theme_bw(), panel.gridcol = "white", legend.pos = "bottom",
   axis.textcolor.x = "black", axis.textcolor.y = "black", axis.title.color = "black",
   legend.size = 0.7, legend.title.face = NULL)
pp2[["data"]][["group"]] <- factor(c("-1 SD", "M", "+1 SD"), levels =c("-1 SD", "M", "+1 SD"))
pp2

p3 <- plot_model(fit.3a.3, title = "", line.size = 0.7, legend.title = "Work Load (within-
   person)", axis.title = c("B-PNI grandiose narcissism (centered)", "Daily Shame"), type =
   "int", mdrt.values = "meansd", colors = c("grey80","grey50","grey20"), ci.lvl = NA,
   pred.type = "re", axis.lim = c(1,10))
pp3 <- p3[[1]] + set_theme(base = theme_bw(), panel.gridcol = "white", legend.pos = "bottom",
   axis.textcolor.x = "black", axis.textcolor.y = "black", axis.title.color = "black",
   legend.size = 0.7, legend.title.face = NULL)
pp3[["data"]][["group"]] <- factor(c("-1 SD", "M", "+1 SD"), levels =c("-1 SD", "M", "+1 SD"))
pp3

reghelper::simple_slopes(fit.3a.3)

##[FFNI]Interaction with Level 1 work Load
model.3a.4 <- "DailyShame ~ dayN + FFNI_GN.c*WorkLoad.wpc + FFNI_VN.c*WorkLoad.wpc +
   WorkLoad.bpc + TraitEsteem.c + PID_negaff.c + (1 + WorkLoad.wpc + dayN|mail)"
fit.3a.4 <- lmer(model.3a.4, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.3a.4)
sjPlot::tab_df(round(summary(fit.3a.4)$coefficients, digits = 2), file = "fit3a4.html")

p4 <- plot_model(fit.3a.4, title = "", line.size = 0.7, legend.title = "Work Load (within-
   person)", axis.title = c("FFNI-SF vulnerable narcissism (centered)", "Daily Shame"), type =
   "int", mdrt.values = "meansd", colors = c("grey80","grey50","grey20"), ci.lvl = NA,
   pred.type = "re", axis.lim = c(1,10))
pp4 <- p4[[2]] + set_theme(base = theme_bw(), panel.gridcol = "white", legend.pos = "bottom",
   axis.textcolor.x = "black", axis.textcolor.y = "black", axis.title.color = "black",
   legend.size = 0.7, legend.title.face = NULL)
pp4[["data"]][["group"]] <- factor(c("-1 SD", "M", "+1 SD"), levels =c("-1 SD", "M", "+1 SD"))
pp4

reghelper::simple_slopes(fit.3a.4)
```

```
#[BPNI]Interaction with Level 1 positive events
model.3a.5 <- "DailyShame ~ dayN + BPNI_GN.c*PosEvent.wpc + BPNI_VN.c*PosEvent.wpc +
   PosEvent.bpc + TraitEsteem.c + PID_negaff.c + (1 + PosEvent.wpc + dayN|mail)"
fit.3a.5 <- lmer(model.3a.5, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.3a.5)
sjPlot::tab_df(round(summary(fit.3a.5)$coefficients, digits = 2), file = "fit3a5.html")

#[FFNI]Interaction with Level 1 positive events
model.3a.6 <- "DailyShame ~ dayN + FFNI_GN.c*PosEvent.wpc + FFNI_VN.c*PosEvent.wpc +
   PosEvent.bpc + TraitEsteem.c + PID_negaff.c + (1 + PosEvent.wpc + dayN|mail)"
fit.3a.6 <- lmer(model.3a.6, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.3a.6)
sjPlot::tab_df(round(summary(fit.3a.6)$coefficients, digits = 2), file = "fit3a6.html")

p5 <- plot_model(fit.3a.6, title = "", line.size = 0.7, legend.title = "Positive Events
   (within-person)", axis.title = c("FFNI-SF vulnerable narcissism (centered)", "Daily
   Shame"), type = "int", mdrt.values = "meansd", colors = c("grey80","grey50","grey20"),
   ci.lvl = NA, pred.type = "re", axis.lim = c(1,10))
pp5 <- p5[[2]] + set_theme(base = theme_bw(), panel.gridcol = "white", legend.pos = "bottom",
   axis.textcolor.x = "black", axis.textcolor.y = "black", axis.title.color = "black",
   legend.size = 0.7, legend.title.face = NULL)
pp5[["data"]][["group"]] <- factor(c("-1 SD", "M", "+1 SD"), levels =c("-1 SD", "M", "+1 SD"))
pp5

reghelper::simple_slopes(fit.3a.6)

#DAILY SITUATIONS*DAILY NARCISSISM - Level 1 interaction

#Daily narcissism and social stress
model.3b <- "DailyShame ~ dayN + DailyGN.wpc*SocStress.wpc + DailyVN.wpc*SocStress.wpc +
   SocStress.bpc + DailyGN.bpc + DailyVN.bpc + DailyEsteem.bpc + DailyEsteem.wpc +
   PID_negaff.c + (0 + dayN|mail) + (1 + SocStress.wpc + DailyVN.wpc + DailyEsteem.wpc|mail)"
      fit.3b <- lmer(model.3b, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.3b)
#random effect of DailyGN.wpc omitted due to variance close to zero and singularity issues
sjPlot::tab_df(round(summary(fit.3b)$coefficients, digits = 2), file = "fit3b.html")

#Daily narcissim and work load
model.3b.2 <- "DailyShame ~ dayN + DailyGN.wpc*WorkLoad.wpc + DailyVN.wpc*WorkLoad.wpc +
   WorkLoad.bpc + DailyGN.bpc + DailyVN.bpc + DailyEsteem.bpc + DailyEsteem.wpc + PID_negaff.c
   + (0 + dayN|mail) + (1 + WorkLoad.wpc + DailyVN.wpc + DailyEsteem.wpc|mail)"
fit.3b.2 <- lmer(model.3b.2, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.3b.2)
#random effect of DailyGN.wpc omitted due to variance close to zero and singularity issues
sjPlot::tab_df(round(summary(fit.3b.2)$coefficients, digits = 2), file = "fit3b2.html")

#Daily narcissim and positive events
model.3b.3 <- "DailyShame ~ dayN + DailyGN.wpc*PosEvent.wpc + DailyVN.wpc*PosEvent.wpc +
   PosEvent.bpc + DailyGN.bpc + DailyVN.bpc + DailyEsteem.bpc + DailyEsteem.wpc + PID_negaff.c
   + (0 + dayN|mail) + (1 + PosEvent.wpc + DailyVN.wpc + DailyEsteem.wpc|mail)"
fit.3b.3 <- lmer(model.3b.3, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.3b.3)
#random effect of DailyGN.wpc omitted due to variance close to zero and singularity issues
sjPlot::tab_df(round(summary(fit.3b.3)$coefficients, digits = 2), file = "fit3b3.html")
#-------------------------------------------------------------------------------------------#
#ADDITIONAL ANALYSES

  #Centering B-PNI facets
  data$BPNI_CSE.c <- data$BPNI_CSE - mean(data.b$BPNI_CSE, na.rm = TRUE)
  data$BPNI_HS.c <- data$BPNI_HS - mean(data.b$BPNI_HS, na.rm = TRUE)
  data$BPNI_DEV.c <- data$BPNI_DEV - mean(data.b$BPNI_DEV, na.rm = TRUE)
  data$BPNI_ER.c <- data$BPNI_ER - mean(data.b$BPNI_ER, na.rm = TRUE)
  data$BPNI_GF.c <- data$BPNI_GF - mean(data.b$BPNI_GF, na.rm = TRUE)
  data$BPNI_SSSE.c <- data$BPNI_SSSE - mean(data.b$BPNI_SSSE, na.rm = TRUE)
  data$BPNI_EXP.c <- data$BPNI_EXP - mean(data.b$BPNI_EXP, na.rm = TRUE)
  #Centering FFNI-SF facets
  data$FFN_AS.c <- data$FFN_AS - mean(data.b$FFN_AS, na.rm = TRUE)
  data$FFN_Ar.c <- data$FFN_Ar - mean(data.b$FFN_Ar, na.rm = TRUE)
  data$FFN_Au.c <- data$FFN_Au - mean(data.b$FFN_Au, na.rm = TRUE)
  data$FFN_D.c <- data$FFN_D - mean(data.b$FFN_D, na.rm = TRUE)
```

```
  data$FFN_En.c <- data$FFN_En - mean(data.b$FFN_En, na.rm = TRUE)
  data$FFN_Exh.c <- data$FFN_Exh - mean(data.b$FFN_Exh, na.rm = TRUE)
  data$FFN_Exp.c <- data$FFN_Exp - mean(data.b$FFN_Exp, na.rm = TRUE)
  data$FFN_GF.c <- data$FFN_GF - mean(data.b$FFN_GF, na.rm = TRUE)
  data$FFN_In.c <- data$FFN_In - mean(data.b$FFN_In, na.rm = TRUE)
  data$FFN_Emp.c <- data$FFN_Emp - mean(data.b$FFN_Emp, na.rm = TRUE)
  data$FFN_Man.c <- data$FFN_Man - mean(data.b$FFN_Man, na.rm = TRUE)
  data$FFN_NAdm.c <- data$FFN_NAdm - mean(data.b$FFN_NAdm, na.rm = TRUE)
  data$FFN_RAn.c <- data$FFN_RAn - mean(data.b$FFN_RAn, na.rm = TRUE)
  data$FFN_Sh.c <- data$FFN_Sh - mean(data.b$FFN_Sh, na.rm = TRUE)
  data$FFN_Thr.c <- data$FFN_Thr - mean(data.b$FFN_Thr, na.rm = TRUE)

#MODEL WITH B-PNI FACETS
model.f1 <- "DailyShame ~ dayN + BPNI_CSE.c + BPNI_HS.c + BPNI_DEV.c + BPNI_ER.c + BPNI_GF.c +
   BPNI_SSSE.c + BPNI_EXP + PID_negaff.c + TraitEsteem.c + (1 + dayN|mail)"
fit.f1 <- lmer(model.f1, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.f1)

#MODEL WITH FFNI-SF FACETS
model.f2 <- "DailyShame ~ dayN + FFN_Thr.c + FFN_Sh.c + FFN_RAn.c + FFN_NAdm.c + FFN_Man.c +
   FFN_Emp.c + FFN_In.c + FFN_GF.c + FFN_Exp.c + FFN_Exh.c + FFN_En.c + FFN_D.c + FFN_Au.c +
   FFN_Ar.c + FFN_AS.c + PID_negaff.c + TraitEsteem.c + (1 + dayN|mail)"
fit.f2 <- lmer(model.f2, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.f2)

#MODELS WITH LOG-TRANSFORMED DAILY SHAME

#[BPNI]Random-intercept model with level 2 predictors
model.l1a <- "logDshame ~ dayN + BPNI_GN.c + BPNI_VN.c + PID_negaff.c + TraitEsteem.c + (1 +
   dayN|mail)"
fit.l1a <- lmer(model.l1a, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.l1a)

#[FFNI]Random-intercept model with level 2 predictors
model.l1a.2 <- "logDshame ~ dayN + FFNI_GN.c + FFNI_VN.c + PID_negaff.c + TraitEsteem.c + (1 +
   dayN|mail)"
fit.l1a.2 <- lmer(model.l1a.2, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.l1a.2)

#Random-slope model with level 1 predictors:
model.l1b <- "logDshame ~ dayN + DailyVN.wpc + DailyVN.bpc + DailyGN.wpc + DailyGN.bpc +
   DailyEsteem.wpc + DailyEsteem.bpc + PID_negaff.c + (0 + dayN|mail) + (1 + DailyVN.wpc +
   DailyGN.wpc + DailyEsteem.wpc|mail)"
fit.l1b <- lmer(model.l1b, data = data, REML = FALSE, control = lmerControl(optimizer =
   "bobyqa", optCtrl=list(maxfun=2e5)))
summary(fit.l1b)

#[BPNI]Interaction with Level 1 social stress
model.l3a <- "logDshame ~ dayN + BPNI_GN.c*SocStress.wpc + BPNI_VN.c*SocStress.wpc +
   SocStress.bpc + TraitEsteem.c + PID_negaff.c + (1 + SocStress.wpc + dayN|mail)"
fit.l3a <- lmer(model.l3a, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.l3a)

#[FFNI]Interaction with Level 1 social stress
model.l3a.2 <- "logDshame ~ dayN + FFNI_GN.c*SocStress.wpc + FFNI_VN.c*SocStress.wpc +
   SocStress.bpc + TraitEsteem.c + PID_negaff.c + (1 + SocStress.wpc + dayN|mail)"
fit.l3a.2 <- lmer(model.l3a.2, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.l3a.2)

#[BPNI]Interaction with Level 1 work Load
model.l3a.3 <- "logDshame ~ dayN + BPNI_GN.c*WorkLoad.wpc + BPNI_VN.c*WorkLoad.wpc +
   WorkLoad.bpc + TraitEsteem.c + PID_negaff.c + (1 + WorkLoad.wpc + dayN|mail)"
fit.l3a.3 <- lmer(model.l3a.3, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.l3a.3)

#[FFNI]Interaction with Level 1 work Load
model.l3a.4 <- "logDshame ~ dayN + FFNI_GN.c*WorkLoad.wpc + FFNI_VN.c*WorkLoad.wpc +
   WorkLoad.bpc + TraitEsteem.c + PID_negaff.c + (1 + WorkLoad.wpc + dayN|mail)"
```

```
fit.l3a.4 <- lmer(model.l3a.4, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.l3a.4)

#[BPNI]Interaction with daily (Level 1) positive events
model.l3a.5 <- "logDshame ~ dayN + BPNI_GN.c*PosEvent.wpc + BPNI_VN.c*PosEvent.wpc +
   PosEvent.bpc + TraitEsteem.c + PID_negaff.c + (1 + PosEvent.wpc + dayN|mail)"
fit.l3a.5 <- lmer(model.l3a.5, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.l3a.5)

#[FFNI]Interaction with daily (Level 1) positive events
model.l3a.6 <- "logDshame ~ dayN + FFNI_GN.c*PosEvent.wpc + FFNI_VN.c*PosEvent.wpc +
   PosEvent.bpc + TraitEsteem.c + PID_negaff.c + (1 + PosEvent.wpc + dayN|mail)"
fit.l3a.6 <- lmer(model.l3a.6, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.l3a.6)

#Daily narcissim and social stress
model.l3b <- "logDshame ~ dayN + DailyGN.wpc*SocStress.wpc + DailyVN.wpc*SocStress.wpc +
   SocStress.bpc + DailyGN.bpc + DailyVN.bpc + DailyEsteem.bpc + DailyEsteem.wpc +
   PID_negaff.c + (0 + dayN|mail) + (1 + SocStress.wpc + DailyVN.wpc + DailyEsteem.wpc|mail)"
fit.l3b <- lmer(model.l3b, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.l3b)

#Daily narcissim and work load
model.l3b.2 <- "logDshame ~ dayN + DailyGN.wpc*WorkLoad.wpc + DailyVN.wpc*WorkLoad.wpc +
   WorkLoad.bpc + DailyGN.bpc + DailyVN.bpc + DailyEsteem.bpc + DailyEsteem.wpc + PID_negaff.c
   + (0 + dayN|mail) + (1 + WorkLoad.wpc + DailyVN.wpc + DailyEsteem.wpc|mail)"
fit.l3b.2 <- lmer(model.l3b.2, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.l3b.2)
sjPlot::tab_df(round(summary(fit.l3b.2)$coefficients, digits = 2), file = "fitl3b2.html")

#Daily narcissism and positive events
model.l3b.3 <- "logDshame ~ dayN + DailyGN.wpc*PosEvent.wpc + DailyVN.wpc*PosEvent.wpc +
   PosEvent.bpc + DailyGN.bpc + DailyVN.bpc + DailyEsteem.bpc + DailyEsteem.wpc +
   PID_negaff.c + (0 + dayN|mail) + (1 + PosEvent.wpc + DailyVN.wpc + DailyEsteem.wpc|mail)"
fit.l3b.3 <- lmer(model.l3b.3, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.l3b.3)

#Model with B-PNI facets
model.lf1 <- "logDshame ~ dayN + BPNI_CSE.c + BPNI_HS.c + BPNI_DEV.c + BPNI_ER.c + BPNI_GF.c +
   BPNI_SSSE.c + BPNI_EXP + PID_negaff.c + TraitEsteem.c + (1 + dayN|mail)"
fit.lf1 <- lmer(model.lf1, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.lf1)

#Model with FFNI-SF facets
model.lf2 <- "logDshame ~ dayN + FFN_Thr.c + FFN_Sh.c + FFN_RAn.c + FFN_NAdm.c + FFN_Man.c +
   FFN_Emp.c + FFN_In.c + FFN_GF.c + FFN_Exp.c + FFN_Exh.c + FFN_En.c + FFN_D.c + FFN_Au.c +
   FFN_Ar.c + FFN_AS.c + PID_negaff.c + TraitEsteem.c + (1 + dayN|mail)"
fit.lf2 <- lmer(model.lf2, data, REML = FALSE, control = lmerControl(optimizer = "bobyqa",
   optCtrl=list(maxfun=2e5)))
summary(fit.lf2)
```

APPENDIX E

Supplementary tables for Study 3

Supplementary Table 1. Effect of time on daily shame: model comparison.

	***DV*: Daily shame**			***DV*: Daily shame (log-transformed)**		
	AIC	*BIC*	$\Delta\chi^2(\Delta df)$	*AIC*	*BIC*	$\Delta\chi^2(\Delta df)$
Model.0	27169.08	27188.40	-	10696.42	10715.74	
Model.0a	27156.23	27181.99	14.85(1)**	10631.65	10657.41	66.77(1)**
Model.0b	27067.25	27099.45	90.98(1)**	10561.64	10593.83	72.01(1)**
Model.0c	27065.67	27104.31	3.58(1)	10563.58	10602.22	0.05(1)

Note. *DV* = Dependent variable; *AIC* = Akaike Information Criterion; *BIC* = Bayesian Information Criterion; Model.0 = random-intercept model; Model.0a = random-intercept model with fixed effect of day; Model.0b = random-slope model with random effect of day undcorrelated with intercept; Model.0c = random-slope model with random effect of day correlated with intercept. ***p* < .001

MODELS WITH LOG-TRANSFORMED LEVEL 1 SHAME AS DEPENDENDET VARIABLE

(log-transformed shame = log(DailyShame + 1); *M* = 1.35, *SD* = 0.97, range = 0 – 3.71, skew = -0.01, kurtosis = -1.09)

Supplementary Table 2. Random-intercepts models with Level 2 narcissism, self-esteem, and negative affectivity

	B-PNI [1]			FFNI-SF [2]		
	Estimate	*SE*	*t*	*Estimate*	*SE*	*t*
Intercept	1.51	0.04	35.18**	1.51	0.04	34.41**
Day	-0.01	0.00	-5.79**	-0.01	0.00	-5.82**
GN	0.21	0.08	2.53*	0.00	0.00	-0.09
VN	0.03	0.08	0.43	0.01	0.01	1.45
PID-NA	0.05	0.10	0.52	0.09	0.1	0.93
RSES	-0.44	0.10	-4.49**	-0.36	0.1	-3.66**

Note. Dependent variable: log-transformed Level 1 shame; N (participants) = 196; Number of observations = 4626. GN = grandiose narcissism (centered); VN = vulnerable narcissism (centered); PID-NA = PID-5 negative affectivity (centered); RSES = Rosenberg Self-Esteem Scale (centered); *SE* = Standard Error. **p* < .05; ***p* < .001

[1] The model was tested measuring narcissism through the Brief Pathological Narcissism Inventory (B-PNI).

[2] The model was tested measuring narcissism through the Five Factor Narcissism Inventory-Short Form (FFNI-SF).

Supplementary Table 3. Random-intercept models with Level 2 narcissism and controls, and interaction with situations.

	Social Stress				Work Load				Positive Events			
	B-PNI [1]		FFNI-SF [2]		B-PNI [1]		FFNI-SF [2]		B-PNI [1]		FFNI-SF [2]	
	Estimate	*t*	*Estimate*	*t*	*Estimate*	*t*	*Estimate*	*t*	*Estimate*	*t*	*Estimate*	*t*
Intercept	1.48	37.33**	1.48	37.17**	1.52	36.97**	1.52	36.18**	1.52	34.66**	1.52	33.80**
Day	-0.01	-4.95**	-0.01	-4.93**	-0.01	-6.11**	-0.01	-6.15**	-0.01	-5.62**	-0.01	-5.65**
Situation.wpc	0.71	14.75**	0.71	15.25**	0.21	10.04**	0.21	10.13**	-0.08	-2.60*	-0.08	-2.77*
Situation.bpc	1.09	7.03**	1.16	7.68**	0.23	3.15**	0.26	3.48**	-0.03	-0.26	0.00	-0.01
GN	0.05	0.66	0.00	-1.41	0.17	2.11*	0.00	-0.41	0.22	2.60*	0.00	-0.05
VN	0.10	1.42	0.01	1.88	0.05	0.72	0.01	1.41	0.03	0.35	0.01	1.42
RSES	-0.30	-3.43**	-0.25	-2.98**	-0.41	-4.30**	-0.34	-3.58**	-0.43	-4.3**	-0.35	-3.49**
PID-NA	0.01	0.09	0.00	-0.02	0.04	0.48	0.08	0.82	0.06	0.61	0.11	1.04
Situation X GN	0.09	1.10	0.01	2.82*	0.08	2.13*	0.00	0.96	-0.09	-1.68	0.00	-1.15
Situation X VN	0.00	-0.06	0.00	0.88	0.03	0.91	0.00	2.37*	-0.02	-0.52	0.00	-1.28

Note. Dependent variable: log-transformed Level 1 shame; N (participants) = 196; Number of observations = 4626. GN = grandiose narcissism (centered); VN = vulnerable narcissism (centered); PID-NA = PID-5 negative affectivity (centered); RSES = Rosenberg Self-Esteem Scale (centered); Situation.wpc & Situation.bpc = within- and between-person part of the situations in the columns. Situation X GN = Interaction of the situation (within-person part) with grandiose narcissism; Situation X VN = Interaction of the situation (within-person part) with vulnerable narcissism. *$p < .05$; **$p < .001$

[1] The models were tested measuring narcissism through the Brief Pathological Narcissism Inventory (B-PNI).

[2] The models were tested measuring narcissism through the Five Factor Narcissism Inventory-Short Form (FFNI-SF).

Supplementary Table 4. Random-slope models with Level 1 narcissism and self-esteem, and Level 2 negative affectivity

	Estimate	*SE*	*t*
Intercept	1.46	0.03	41.34**
Day	-0.01	0.00	-4.33**
VN.wpc	0.29	0.02	18.07**
VN.bpc	0.40	0.03	11.84**
GN.wpc	0.05	0.01	3.90**
GN.bpc	-0.06	0.03	-1.89
SISE.wpc	-0.18	0.02	-9.29**
SISE.bpc	-0.12	0.06	-2.23*
PID-NA	0.05	0.06	0.81

Note. Dependent variable: log-transformed Level 1 shame; N (participants) = 196; Number of observations = 4626. VN.wpc = daily vulnerable narcissism (within-person part); VN.bpc = daily vulnerable narcissism (between-person part); GN.wpc = daily grandiose narcissism (within-person part); GN.bpc = daily grandiose narcissism (between-person part); SISE.wpc = daily self-esteem (within-person part); SISE.bpc = daily self-esteem (between-person part); PID-NA = PID-5 negative affectivity (centered); *SE* = Standard Error. *$p < .05$; **$p < .001$

Supplementary Table 5. Random-slope models with Level 1 narcissism and controls, and interaction with situations.

	Social Stress			Work Load			Positive Events		
	Estimate	*SE*	*t*	*Estimate*	*SE*	*t*	*Estimate*	*SE*	*t*
Intercept	1.47	0.03	42.02**	1.47	0.03	42.68**	1.44	0.04	40.60**
Day	-0.01	0.00	-4.22**	-0.01	0.00	-4.83**	-0.01	0.00	-3.64**
VN.wpc	0.27	0.02	15.41**	0.28	0.02	17.36**	0.30	0.02	18.95**
VN.bpc	0.34	0.04	7.74**	0.39	0.03	11.52**	0.40	0.03	11.58**
GN.wpc	0.04	0.01	3.84**	0.04	0.01	3.37**	0.00	0.01	0.30
GN.bpc	-0.04	0.03	-1.43	-0.06	0.03	-1.92	-0.06	0.04	-1.71
SISE.wpc	-0.17	0.02	-9.11**	-0.17	0.02	-9.19**	-0.19	0.02	-10.70**
SISE.bpc	-0.13	0.06	-2.31*	-0.12	0.06	-2.08*	-0.13	0.06	-2.28*
PID-NA	0.05	0.07	0.84	0.05	0.06	0.77	0.06	0.07	0.93
Situation.wpc	0.22	0.04	5.07**	0.12	0.02	7.61**	0.16	0.02	6.44**
Situation.bpc	0.35	0.17	2.04*	0.09	0.06	1.46	0.02	0.11	0.21
Situation X GN	0.01	0.03	0.44	0.01	0.01	0.48	0.01	0.02	0.70
Situation X VN	-0.06	0.02	-2.75*	-0.02	0.01	-1.86	0.02	0.02	0.93

Note. Dependent variable = log-transformed Level 1 shame; N (participants) = 196; Number of observations = 4626. VN.wpc = daily vulnerable narcissism (within-person part); VN.bpc = daily vulnerable narcissism (between-person part); GN.wpc = daily grandiose narcissism (within-person part); GN.bpc = daily grandiose narcissism (between-person part); SISE.wpc = daily self-esteem (within-person part); SISE.bpc = daily self-esteem (between-person part); PID-NA = PID-5 negative affectivity (centered); Situation.wpc & Situation.bpc = within- and between-person part of the situations in the columns; Situation X GN = Interaction of the situation (within-person part) with grandiose narcissism (within-person part); Situation X VN = Interaction of the situation (within-person part) with vulnerable narcissism (within-person part); *SE* = Standard Error. *$p < .05$; **$p < .001$

Supplementary Table 6. Random-intercept models with Level 2 narcissism (facet-level) and controls.

FFNI-SF	*Estimate*	*SE*	*t*	*B-PNI*	*esimate*	*SE*	*t*
Intercept	1.51	0.04	35.64**	**Intercept**	1.33	0.14	9.62**
Day	-0.01	0.00	-5.84**	**Day**	-0.01	0.00	-5.81**
TS	0.00	0.01	-0.37	**CSE**	0.03	0.06	0.49
Sh	0.03	0.02	1.45	**HS**	0.04	0.05	0.97
RA	-0.03	0.02	-1.63	**DEV**	0.15	0.06	2.59*
NA	0.02	0.03	0.79	**ER**	-0.18	0.06	-3.27**
Man	0.01	0.02	0.42	**GF**	0.16	0.05	3.33**
Emp	0.00	0.02	-0.26	**SSSE**	0.03	0.06	0.43
Ind	0.00	0.02	-0.23	**EXP**	0.08	0.05	1.40
GF	0.05	0.02	3.00**	**PID-NA**	0.10	0.10	1.07
Exp	-0.01	0.02	-0.32	**RSES**	-0.30	0.10	-2.91**
Exh	-0.02	0.01	-1.44				
En	-0.01	0.02	-0.40				
Dist	0.00	0.01	0.23				
Aut	0.01	0.01	0.77				
Arr	0.01	0.02	0.31				
AS	-0.01	0.01	-0.79				
PID-NA	0.11	0.10	1.05				
RSES	-0.30	0.11	-2.68*				

Note. Dependent variable = log-transformed Level 1 shame; N (participants) = 196; Number of observations = 4626.

FFNI-SF scales: AS = Attention Seeking; Arr = Arrogance; Aut = Authoritativeness; Dist = Cynicism/distrust; En = Entitlement; Exh = Exhibitionism; Exp = Exploitativeness; GF = Grandiose Fantasies; Ind = Indifference; Emp = Lack of Empathy; Man = Manipulativeness; NA = Need for Admiration; RA = Reactive Anger; Sh = Shame; TS = Thrill Seeking.
B-PNI scales: CSE = Contingent self-esteem (centered); HS = Hiding the self (centered); DEV = Devaluing (centered); ER = Entitlement rage (centered); GF = Grandiose fantasy (centered); SSSE = Self-sacrificing self-enhancement (centered); EXP = Exploitativeness (centered).

PID-NA = PID-5 negative affectivity (centered); RSES = Rosenberg Self-Esteem Scale (centered).
SE = Standard Error. *$p < .05$; **$p < .001$