
***The paradox of overcontrol,
perfectionism, and self-criticism:
A cases series on gifted students***



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Abstract

The objective of this pilot-study is to report the preliminary results of a specifically designed therapy for gifted students enrolled in highly competitive PhD programs. We outlined a case series design (n=7), with initial, final, and 1-month follow-up assessments. Inclusion criteria were: to be a student in an international PhD program; to be defined as a gifted student (at least one WAIS-IV Index ≥ 130); to be diagnosed with a personality disorder in accordance with DSM-5 Alternative Model of Personality Disorders. Primary outcomes were general symptomatology, social disconnection, and personality disorder severity. Secondary outcomes were the presumed therapeutic targets: overcontrol, perfectionism, and self-criticism. The intervention was a 6-month third wave cognitive behavioral therapy aimed at promoting adaptive self-soothing and metacognitive strategies. At the end of the intervention all the participants showed reliable changes in both primary and secondary outcomes.

Key words: gifted student, overcontrol, perfectionism, self-criticism, compassion, metacognition.

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Sommario

Il paradosso di ipercontrollo, perfezionismo e auto-critica: Una serie di casi singoli su studenti plusdotati

L'obiettivo di questo studio pilota è quello di descrivere i risultati preliminari di una terapia specificamente sviluppata per studenti plusdotati iscritti a programmi di dottorato altamente competitivi. Il disegno sperimentale corrisponde ad una serie di casi singoli (n=7), con valutazioni iniziali, finali e di follow-up ad 1 mese. I criteri di inclusione erano: essere uno studente in un programma di dottorato internazionale; essere riconosciuti come plusdotati (almeno un Indice WAIS-IV ≥ 130); avere una diagnosi di disturbo di personalità in conformità con il Modello Alternativo dei Disturbi di Personalità del DSM-5. Gli *outcome* primari erano la sintomatologia generale, la disconnessione sociale e la gravità del disturbo di personalità. Gli *outcome* secondari erano i presunti *target* terapeutici: ipercontrollo, perfezionismo e autocritica. L'intervento era una terapia cognitivo-comportamentale di terza onda della durata di 6 mesi volta a promuovere strategie adattive basate su compassione e metacognizione. Alla fine dell'intervento tutti i partecipanti hanno mostrato cambiamenti significativi agli *outcome* primari e secondari.

Parole chiave: studente plusdotato, ipercontrollo, perfezionismo, autocritica, compassione, metacognizione.

Introduction

Overcontrolled individuals have high personal standards and work hard at not appearing inadequate (Carter *et al.*, 2016; Wiese *et al.*, 2018). They are reinforced in doing so, since they often act pro-socially, regardless of how challenging the demands of the environment are (Lynch and Mizon, 2011). At the same time, this recurrent and sustained effort may cause psychological distress, social disconnection, and an impaired performance. Indeed, expressive suppression negatively affects wellbeing and socialization (Butler *et al.*, 2003, 2014), and under certain circumstances cognitive functioning too (Richards, 2004). Social connectedness and isolation seemingly predict mortality (Holt-Lunstad *et al.*, 2015) and mental health (Saeri *et al.*, 2018), while negative affects, perfectionistic strivings, and distress over tolerance are associated with a reduced intellectual performance (Besser *et al.*, 2008; Scott and Cervone, 2002; Sherry *et al.*, 2010).

These potentially severe outcomes may be particularly exacerbated in persons with prominent perfectionistic traits and self-critical stance, who seem to run into two interconnected forms of neurotic paradox: that is the paradox of behavior which is at one and the same time self-perpetuating and self-defeating" (Mowrer, 1948, p. 571). On the one hand, perfectionism may

be better understood as a complex, and multilevel personality trait that is always maladaptive (Hewitt *et al.*, 2017). Perfectionism may be considered «an interpersonal personality style that develops within a relational context» (Hewitt *et al.*, 2017, p. 99) and whose stability and perniciousness is maintained by an enduring social disconnection pattern. Persons with perfectionistic traits frequently report early experiences of unmet need to attain a sense of felt security and self-regard, and, more broadly, of being accepted and mattering to others. In order to achieve or recover such a sense of belonging they fall down into the trap of a neurotic paradox: they enact maladaptive strategies that lead them to experience what they fear most, that is social disconnection. Hewitt *et al.* (2006) have described how persons paradoxically develop perfectionistic behaviors with the goal of enhancing their connectedness with others. And by doing so, they experience a lack of intimacy and connection with others, finally confirming their inner and threatening belief of not being accepted and matter to others. On the other hand, it has been proven that «when things go wrong for people, those who are self-critical, compared to those who self-reassure, are at increased risk of psychopathology» (Gilbert *et al.*, 2006, p. 183). Self-criticism may be seen as a maladaptive social mentality that evolved in response to early or recurrent experiences of being rejected, criticized, attacked (Gilbert, 2009). Paul Gilbert has suggested that the soothing system, a mammalian affect regulation system normally triggered by cues of social safeness, is poorly accessible in people whose threat system is hyperactivated by self-criticism. And so, self-criticism may lead to another neurotic paradox similar to that of perfectionism: in order to be appreciated by others, I attack myself or parts of me and in doing so I obtain what scares me most, that is feeling isolated and worthless.

We decided to study this presumed intertwined pattern of overcontrol, perfectionism and self-criticism in a group of persons who may be considered particularly at risk for: gifted students in highly competitive programs. While a stereotypical vision of gifted persons is as dysregulated and odd (Baudson, 2016), intellectual giftedness has been recurrently correlated with social isolation, emotional inhibition, introversion, and detachment (Csikszentmihalyi, Rathunde and Whalen, 1993; Hollingworth, 1942; Matta *et al.*, 2019). Several studies have reported an increasing risk for psychological distress, that is reputed to be attenuated by self-efficacy (Chan, 2005; 2006), and exacerbated by highly competitive undergraduate or postgraduate programs (Almukhambetova and Hernández-Torrano, 2020; Steenbergen-Hu *et al.*, 2020). And being gifted and perceiving an external prescription to perfection seem to jointly predict a recurrent difficulty in

internalizing and recognizing one's own success (Lee *et al.*, 2021). Indeed, two competing theories have been proposed about giftedness: a harmony theory (gifted students are well adjusted and successful) and disharmony theory (giftedness represents a risk for development), respectively (Godor and Szymanski, 2017; Winner, 2000). It has been suggested that these competing theories may be due to the diverse methods used in assessing giftedness and, especially, maladaptive personality styles such as high rejection and low affiliation traits (Baudson and Ziemes, 2016; Matta *et al.*, 2019). From a clinically informed point of view, this apparent dichotomy may be reframed and solved. We hypothesize that the reported incongruencies between the two theories may be explained by considering the pathological role of three specific patterns. Those with prominent overcontrolled, perfectionist traits and self-critical social mentalities may exhibit disharmony, turning their intellectual giftedness into a psychopathological risk factor.

The aim of this pilot-study is to test the feasibility of a specifically developed third wave cognitive behavioral therapy (TW-CBT; Hayes and Hofmann, 2017) for adult gifted students that is intended to target three specific processes: overcontrol, perfectionism and self-criticism. Such processes may be considered the maintaining factors of a personality impairment assessed through Criterion A (i.e. severity) of DSM-5 Alternative Model of Personality Disorders (AMPD; First *et al.*, 2018). We hypothesize the existence of a dysfunctional pattern in gifted students working in highly competitive PhD programs. They pursue high standards in order to be socially accepted, but by doing so they often develop maladaptive overcontrol, perfectionism and self-criticism. Many studies have reported a recurring personality pattern in intellectual giftedness, defined by expressive suppression, detachment, perfectionistic self-presentation strategies, and self-critical self-to-self relating (Blatt, 1995; Matta *et al.*, 2019; Speirs Neumeister, 2007). Moreover, the consequent maladaptive behaviors may isolate them and reduce their resilience and performance, thus increasing, through a vicious cycle, their sense of maladjustment in dealing with a competitive environment (Sherry *et al.*, 2010).

We outlined a specifically designed TW-CBT for personality pathology aimed at integrating components from Compassion Focused Therapy (CFT; Gilbert, 2009) and Metacognitively Oriented Psychotherapy (MOP; Dimaggio and Lysaker, 2010). We opted for this integrative solution on the basis of the following reasons. First, there is scarce evidence in favor of existing protocols for gifted students to rely upon (Rinn and Bishop, 2015). Second, recent advances of TW-CBT are focused on processes enabling a transdiagnostic and evolutionary look at maladjustment (Hayes and

Hofmann, 2017). Third, MOP has reported promising results in treating severe and diverse personality disorders (PDs), targeting the transdiagnostic factor of metacognition, that is, the ability of understanding and integrating one's own and others' experience (Semerari *et al.*, 2014). MOP refers to different approaches, such as Metacognitive Interpersonal Psychotherapy (Dimaggio *et al.*, 2020) and Metacognitive Reflection and Insight Therapy (Lysaker and Klion, 2018), aimed at progressively supporting the recovery of metacognitive functions by eliciting and exploring autobiographical episodes through narrative and experiential techniques. Fourth, CFT hypothesizes that the soothing system is poorly accessible in people whose threat system is hyper aroused by self-criticism (Gilbert and Procter, 2006). A primary objective of CFT is to increase compassion for one's own suffering, as a way to strengthen the ability to generate a self-soothing response to distress and a healthy approach to prosociality (Gilbert *et al.*, 2019). Fifth, a few scholars highlight a potentially conjoined effect of compassion and metacognition in promoting affect regulation and disidentification from distressful internal experiences (Bernstein *et al.*, 2019; Dorjee, 2016; Gumley, 2011; Hochheiser *et al.*, 2020). And more specifically, we pilot-tested in a sample of persons diagnosed with personality disorders who were previously treated with MOP, a tailored CFT group intervention aimed at targeting overcontrol, perfectionism, and self-criticism (Cheli *et al.*, 2021).

We hypothesize that a transdiagnostic approach to personality functioning, as a way to promote adaptive self-soothing and metacognitive strategies, may be an effective intervention for PhD students whose experience is shaped by intellectual giftedness and competitive environments.

Method

Participants

Seven consecutive PhD students were admitted to the study after having completed informed consent forms. The study was approved by the Tages Onlus Ethical Committee (Ref.No. 03-120919). Inclusion criteria were: (i) to be students in an international PhD program; (ii) to be defined as a gifted student, by having reported at least one WAIS-IV Index ≥ 130 (Wechsler, 2008); to be diagnosed with a PD in accordance with Criterion A of DSM-5 AMPD (First *et al.*, 2018). Exclusion criteria were: (i) having a comorbid diagnosis in addition to a PD; (ii) being under pharmacological treatment.

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The male to female ratio was 4:3, ages ranged between 21 to 28 (see Table 1). 4 out 7 were at the first year of their PhD program and from European origin.

Table 1 – Descriptives of the sample

	Patients						
	1	2	3	4	5	6	7
Sex	f	m	f	m	f	f	m
Age	21	24	25	22	23	28	22
Phd Year	1	3	2	1	3	1	1
Country	NA	WE	EE	WE	SA	EE	WE
LPFS	3	2	3	3	2	2	2

Note: LPFS: Level of Personality Functioning at initial assessment; f=female; m=male; NA: North America; WE: Western Europe; EE: Eastern Europe; South America.

Structured Clinical Interview for the DSM-5 AMPD (SCID-5-AMPD; First et al., 2018). This is a semistructured diagnostic interview for the assessment of personality pathology. It is composed of three modules, the first of which corresponds to Criterion A, scored through a Level of Personality Functioning Scale (LPFS) ranging between 0 and 4 (clinical threshold ≥ 2). The interrater reliability is good, with an intraclass correlation coefficient of .96 for total GLPF.

Depression, Anxiety and Stress Scale (DASS-21; Lovibond and Lovibond, 1995). DASS-21 is 21-item likert scale for the assessment of depression, anxiety and stress through three different subscales. A total score (DASS-21-T) can be computed by adding all the items. The reliability of the scales is good, with Cronbach's α ranging from .78 to .89.

UCLA Loneliness Scale (UCLA-LS; Russell, 1996): The UCLA-LS is a 20-item scale designed to measure one's subjective feelings of loneliness as well as feelings of social isolation. The total score is the sum of all the items. The scale has been revised three times and the final version is highly reliable (Cronbach's α : .94; test-retest r = .73).

Functions of Self-Criticizing/attacking Scale (FSCS; Gilbert et al., 2004): The FSCS is a 22-item measure using a Likert scale, which measures self-reassurance (reassured-self; FSCRS-RS) and two types of self-criticism:

inadequate-self (FSCRS-IS) and hated-self (FSCRS-HS). The reliability is good, with Cronbach's alphas ranging between 0.86, and 0.90.

Perfectionism Cognitions Inventory (PCI; Flett *et al.*, 2007). PCI is a 25-item Likert scale which measures the automatic thoughts regarding perfectionism. A total score can be generated by adding all the items, reporting a high level of internal consistency with an obtained Cronbach alpha of .95.

Distress Overtolerance Scale (DOS; Gorey *et al.*, 2018). DOS is a 16-item Likert scale composed by two subscales referring to the Capacity for Harm and the Fear of Negative Evaluation, respectively. A total score (DOS-T) corresponds to the mean of all the items. The reliability is good, with Cronbach's alphas ranging between 0.81, and 0.90.

Procedure

Participants did not receive any gain for joining the study except for the intervention itself. One researcher conducted the assessment, blindly to the therapist. Another researcher regularly supervised the therapist who treated the participants. All of the research team members had been trained in TW-CBT, MOP, and CFT and had at least 5 years of experience in treating PDs. Primary outcomes were defined as the remission from PD and a reliable change at DASS-21-T and UCLA-LS. Secondary outcomes were reliable changes at DOS-T, PCI, and FSCRS-IS. Primary and secondary outcomes were scored at initial, final, and 1-month follow-up assessments. Reliability of changes was calculated through the Reliable Change Index (RCI; Jacobson and Truax, 1991). Pre-post changes in the sample ($n = 7$) were investigated through Student's *t* test for the self-reported primary outcomes (DASS-12; UCLA-LS), despite the low sample size (de Winter, 2013).

Intervention

The intervention lasted 6-month (24 sessions). Our theoretical framework refers to TW-CBT as a form of therapy that is driven by hypothesis testing and case formulation (Waltman and Sokol, 2017), and is focused on core dimensions and processes of one's own experience (Hayes and Hofmann, 2017). In order to develop a transdiagnostic approach to maladaptive strategies in overcontrolled gifted students, we integrate TW-CBT with

components of CFT and MOP. We assume that three recurrent processes (i.e. overcontrol, perfectionism, self-criticism) represent a vicious cycle constantly reducing interpersonal and intrapersonal resources, and psychological flexibility. Thus, we focused on promoting self-soothing and metacognitive strategies through three integrated modules. The first module was aimed at construing shared conceptualization and therapeutic alliance. The second module focused on pursuing a change in the self-to-self relation, by increasing self-compassion and self-reflexivity. The third module was aimed at promoting a healthier approach to socialization, by increasing compassion for and awareness of the other. Metacognitively oriented narrative interventions (Dimaggio *et al.*, 2010) were integrated with experiential techniques derived from compassionate mind training (Gilbert and Procter, 2006).

Table 2 – Reliable changes in self-reported measures

		Patients						
		1	2	3	4	5	6	7
<i>DASS-21-T</i>	t_0-t_1	9,41*	8,30*	9,41*	9,68*	5,53*	6,36*	8,85*
	t_1-t_2	0,28	0,28	0,83	1,38	-0,28	0	-0,55
<i>UCLA-LS</i>	t_0-t_1	3,95*	2,11*	2,37*	2,37*	2,11*	2,63*	5,00*
	t_1-t_2	0,79	-0,53	0,79	1,32	-0,26	-0,26	-0,79
<i>DOS-T</i>	t_0-t_1	6,15*	4,87*	6,81*	6,67*	4,87*	2,92 ^o *	4,55*
	t_1-t_2	0,34	-0,3	0,97	-0,67	0	0,49	0,17
<i>PCI</i>	t_0-t_1	5,55*	4,13*	5,94*	3,74*	3,87*	5,17*	4,39*
	t_1-t_2	0,26	2,39	-0,39	0,52	0,65	0,52	0,65
<i>FSCRS-IS</i>	t_0-t_1	3,71*	2,38*	2,38*	3,71*	2,38*	2,65*	3,97*
	t_1-t_2	0,26	0,53	0,26	0,26	0	0,53	0,26

Note: Reliable change index (RCI) is scored for all the self-reported measures. Reliable changes ($RCI \geq 1.96$) between initial and final (t_0-t_1) and between final and 1-month follow-up assessment (t_1-t_2) are highlighted (*). *DASS-21-T*: Depression, Anxiety and Stress Scale total score; *UCLA-LS*: UCLA Loneliness Scale; *DOS-T*: Distress Overtolerance Scale total score; *PCI*: Perfectionism Cognitions Inventory total score; *FSCRS-IS*: Inadequate Self subscale of Functions of Self-Criticizing/attacking Scale.

Results

Neither adverse events (e.g. self-injury; hospitalization; etc.) nor drop-outs were recorded, and all recruited patients completed the intervention and all 24 sessions. During the follow-up interview (1 month after the end of the intervention) the participants reported to feel a reduced sense of emotional distress and social isolation. 5 out of 7 also described an increased sense of agency when dealing with their PhD challenges. The remaining 2 participants were more aware of their difficulties by putting forward the hypothesis that they no longer want to continue their academic career once the PhD is completed. 6 out of 7 patients recognized during the shared conceptualization that the vicious circle of self-criticism, perfectionism and overcontrol was at the root of their suffering. One person did not like the use of and did not recognize herself in the perfectionism construct which was therefore no longer used in therapy.

At final assessment, all of the subjects demonstrated a remission from PD, that was maintained at 1-month follow-up. Of note, at initial assessment 4 out of 7 were reporting just a moderate personality pathology (LPFS=2). All of the self-reported measures showed reliable changes at both final and 1-month follow-up assessments ($RCI \geq 1.96$; see Table 2). Pre-post changes in self-reported primary outcomes were also calculated for the whole sample: both DASS-21 ($t=11.039$; $df=12$; $p<.001$) and UCLA-LS ($t=6.057$; $df=12$; $p<.001$) showed a significant change at the end of the intervention, that was maintained at 1-month follow-up.

Discussion

The aim of this pilot-study was to test the feasibility of a specifically developed therapy for gifted PhD students who reported a personality pathology in accordance with AMPD. The intervention was a 6-month TW-CBT that integrated components of CFT and MOP and was aimed at targeting the presumed maintaining factors of PD: overcontrol, perfectionism, self-criticism. Our results highlight that the proposed therapy is feasible and potentially effective. All 7 patients completed the intervention, reporting a remission from PD and a reliable change in general symptomatology and social disconnection (i.e. primary outcomes). At final assessment, the presumed targets of the therapy and the secondary outcomes (i.e. overcontrol; perfectionism; self-criticism) showed reliable changes too. All of the changes were maintained at 1-month follow-up.

The results that emerged, although they need confirmation on larger samples, offer support for the hypotheses we started from. First, the two neurotic paradoxes we described are seemingly maintaining factors of presenting problems. All the gifted students we recruited reported an overwhelming distress and a sense of social disconnection from their personal and professional life as their main problem. The first module of the intervention (shared conceptualization and therapeutic alliance) confirmed how patients developed maladaptive strategies (e.g. perfectionistic, self-punitive behaviors, etc.) in order to achieve an unattainable sense of belonging. Moreover, we confirmed how these paradoxes were rooted in a vicious cycle of overcontrol, perfectionism and self-criticism. The crossfire between high internal standards and external competitive pressures represented a context at high risk for manifesting the psychopathological sequelae of such a cycle. Recognizing this pattern in the present and even in early episodes offered the therapist the opportunity to promote a different self-to-self relation based on self-acceptance and self-soothing (second module). During this phase, several experiential techniques (e.g. imagery with rescripting; soothing breath; chairwork) were proposed and effectively used. Finally, in the third and last module, the successful experiments within the therapy were used as a secure base for new strategies in pursuing the healthy scope of socialization. Interpersonal experiments were planned, tested and revised, and specific relapse prevention strategies discussed.

Second, as marginal as it may seem compared to general psychopathology, social disconnection really seems to be pivotal in understanding the suffering of gifted students. As social animals, our capacity to regulate our social mentalities is intertwined with our capacity to adapt (Dunbar, 2003). Especially when we understand the two neurotic paradoxes associated with overcontrol, perfectionism and self-criticism, social disconnection becomes an indicator not so much of symptoms as of an extremely dysfunctional personality style. A style that we may relate on the one hand with evolutionary risk minimization strategies (Del Giudice, 2014), on the other hand with a psychopathological super-spectrum that can be defined as internalizing (Ruggero *et al.*, 2019). We are not saying that social withdrawal is referable only to the internalizing spectrum, but rather that in this macro-spectrum the maintaining factors are hypothesized to be the two neurotic paradoxes we have previously described.

Importantly, there were limitations. First, the use of a single case design does not allow for generalization of the results. We may just report the effectiveness in the present sample, and remark possible biases due to specific clinical or socio-demographic characteristics of the subjects.

Second, the proposed integrative approach limits the understanding of the involved mechanisms of change: we cannot say with certainty whether single interventions or a combination of them are effective. Third, such presumed mechanisms must be proven in a large sample, before assuming they are triggers or maintaining factors of the general symptomatology and social disconnection. Further research should address these criticisms and extend our knowledge about. However, considering the scarce available interventions for adult gifted students diagnosed with PD, the present study reports promising results for a potential application of the described treatment.

Conclusion

Overcontrol, perfectionism, and self-criticism seem to be important processes in understanding how a demanding environment may become a trigger of psychological suffering for gifted students. Overcontrolled, gifted students pursue high standards to be socially accepted, but by doing so they often develop maladaptive strategies. We pilot-tested in a cases series of 7 gifted students a 6-month third wave cognitive behavioral therapy aimed at promoting adaptive self-soothing and metacognitive strategies. At the end of the intervention all of the participants showed reliable changes: they remitted from the diagnosis of personality disorder and reported a significant reduction of general symptomatology and social disconnection. Moreover, overcontrol, perfectionism, and self-criticism, that is the three mechanisms that were supposed to be the primary targets of the intervention, showed reliable changes. A therapy focusing on self-soothing and metacognitive strategies may represent an effective intervention for gifted students with personality pathology. Further research is needed in order to confirm these preliminary results in larger samples and through a more rigorous methodology.

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