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## Callous-unemotional traits, borderline personality, and self-injury in gothic subculture

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### ABSTRACT

The present study investigates individual characteristics of a sample of young adults from gothic subculture, in terms of personality traits (i.e., borderline personality and callous-unemotional traits), prevalence and functions of non-suicidal self-injury behaviours (i.e., internal emotion regulation, external emotion regulation, social influence, and sensation seeking). Fifty-one young adults (28 girls and 23 boys, mean age = 26.20, SD = 4.61) were recruited at a gothic meeting in Italy. They completed self-report questionnaires related to self-injury behaviours and self-injury functions, along with measures of borderline personality disorder and callous-unemotional traits. The results indicated that nearly 65% of the participants reported having committed self-injury at least once. Moreover, both bivariate and multivariate analyses indicated that self-injury behaviours were related to borderline personality and internal emotion regulation function. Lastly, association between considered personality traits and self-injury functions were investigated. Overall, results indicated that in gothic subculture self-injury has the function of regulating emotion to maintain the integrity of the Self and is related to the perception of a traumatic reality in which derealization coexists with extreme self-directed aggression.

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**KEYWORDS** Gothic subculture; borderline traits; callous-unemotional traits; self-injury; emotion regulation

### Introduction

The main aim of the present study was to investigate individual characteristics of a sample of young adults from gothic subculture, in terms of personality traits (i.e., borderline personality and callous-unemotional traits), prevalence and functions of non-suicidal self-injury behaviours (i.e., internal emotion regulation, external emotion regulation, social influence, and sensation seeking). Gothic subculture fits very well with the above-mentioned pathological characteristics oriented to both internalizing and externalizing problems (Cohen,

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2002; Kilpatrick, 2005) so, across adolescence and above all across adulthood, it may constitute an ecological niche that interacts with identity questioning and more likely consolidates these pathological attitudes.

The historical and cultural landmark of gothic subculture lies in various forms of literary and cinematographic narratives defined by disquieting settings and characters (e.g., the devil, vampires, psychopaths, femme fatales). Punter (1996) tried to formulate a 'gothic theory' identifying two main features within these narrative genres: the paranoia (i.e., a condition in which the hostile aspects of the real world interact with the fragility of the mind) and the denial of fundamental principles of civilized living. Considering the international music scene, during the 1990s 'gothic' became synonymous of a wide range of rock music genres, including darkwave and heavy metal (Baddeley, 2006; Scharf, 2011). The darkwave genre oscillates between hyperfeminine and androgynous themes, and it is characterized by a depressive and melancholic mood along with a sense of exclusion, derealization, and alienation; conversely, the heavy metal genre is hypermasculine and characterized by angry, hostile, and antisocial behaviours (Haenfler, 2013; Hodkinson, 2002). Members of gothic subculture express themselves through various ways, such as through clothing, body accessories, leisure activities, and artistic products (Baddeley, 2006; Haenfler, 2013; Kilpatrick, 2005; Martin, 2002); this is functional to manifest their feelings of insecurity, alienation, and loss of both emotional and behavioural control in the face of an uncontrollable, traumatic, and alienating reality (Baddeley, 2006; Kilpatrick, 2005). Moreover, folk psychology highlights the close link between gothic subculture and a sense of crisis of the postmodern Self, blaming gothic subculture for increasing young people's propensity to both internalizing (e.g., depression, substance abuse, self-injury behaviours, and suicide) and externalizing (e.g., aggression and antisocial attitudes) problems (Cohen, 2002; Kilpatrick, 2005).

Considering that gothic themes raise educational concerns relating to the risk that the accession to this subculture can result in an atypical or pathologic development, it is important to approach them through a developmental framework. The success of the gothic in western countries has extraordinary proportions (Scharf, 2011). Gothic narratives in the industry for childhood entertainment and their products are widely present in children's and preteens' imaginary world: emblematic examples are the Harry Potter's tales, the gothic makeover of traditional fairy tales (e.g., Maleficent by Disney), Halloween activities, role play games (e.g., Dageon and Dragon) and war games (e.g., Warhammer), and the spread of fashion dolls, such as the Monster High produced by Mattel as an alternative to the more traditional Barbie (Carrington, 2011). Nevertheless, the exposure to these gothic themes during childhood does not directly imply the adherence to the gothic subculture. During adolescence, with the development of abstract thinking and with the greater autonomy in terms of choice of personal look, friends, partners, and leisure activities, it is possible that the gothic themes evolve into a well-marked gothic orientation. Adolescence is

typically characterized by the experience of many possible identities, including the extreme ones; at the same time adolescence is a period in which the bound between normality and pathology (including the pathologic elements outlined in the gothic world) is highly plastic, labile and dynamic (Larrivée, 2013). Further, the transition into adulthood lets individuals to make an identity choice towards a more sharpened gothic pattern; this choice more likely turns previous gothic pretenses in pathological characteristics, such as borderline personality, a callous-unemotional attitude, and the non-suicidal self-injury behaviours.

Borderline personality expresses both the difficulty in exercising control over the internal and/or external reality, and the propensity toward alienation and derealization (Kernberg, 1984). These difficulties are widely emphasized by gothic subculture, in which trauma and persecution, fear and anguish, the creation of a double personality, and alienation from the body are central themes (Kilpatrick, 2005). Callous-unemotional traits (i.e., CU traits) refer to a personality disposition that represents the affective features of psychopathy. Recent research has highlighted the presence of three discrete dimensions of psychopathy: callousness (i.e., lack of empathy, guilt, and remorse for misdeeds), uncaring (i.e., lack of care about one's performance in tasks and for other people's feelings), and unemotional (i.e., deficient or dissimulated emotional affect) (Essau, Sasagawa, & Frick, 2006; Frick & Ray, 2014). Psychopathic tendencies are typical in gothic subculture; within this subculture, it is probable to find a strong propensity to break all taboos and social norms (Moore, 2004; Punter, 1996), a widespread feeling of alienation from the community (Jasper, 2004), and finally a distinct fascination with the figure of the psychopath (Haenfler, 2013; Van Elferen, 2007). A third area of interest refers to non-suicidal self-injury, a set of self-inflicted injury behaviours performed without suicidal intent and using methods that are not socially sanctioned (Nixon & Heath, 2009). According to Martin and colleagues (2013), these behaviours are engaged as coping mechanism to absolve four psychological functions: internal emotion regulation function accounts for the use of non-suicidal self-injury in order to regulate emotions related to internalizing symptoms (such as numbness, sadness, or suicidal urges); external emotion regulation function accounts for the use of non-suicidal self-injury to manage emotions such as frustration or anger that may otherwise be displayed externally; social influence function accounts for the use of non-suicidal self-injury for social manipulation and control over social contexts; sensation-seeking function accounts for the use of non-suicidal self-injury to feel exhilaration or excitement. Non-suicidal self-injury is significantly present within adolescents from gothic subculture (Bowes et al., 2015; Rutledge, Rimer, & Scott, 2008; Young, Sproeber, Groschwitz, Preiss, & Plener, 2014), dramatically revealing the persistence of a situation where the subject is 'under siege' (Favazza, 2011) against a hostile and out-of-control reality. Non-suicidal self-injury represents a timely and pervasive problem within the whole youth population, having its peak around the age of 15 and then decreasing during

adulthood (Brunner et al., 2014; Mode, Ohlsson, Merlo, & Rosvall, 2013). Thus, the persistence of these behaviours in young adults from gothic subculture is a clinically important phenomenon because it could determine the fixation and the hegemony of negative coping strategies.

### *The present study*

The present study aimed to make an in-depth exploration of gothic subculture from a psychological point of view, and it was guided by several specific goals. First, we were interested in investigating the individual characteristics of a sample of young adults from gothic subculture in relation to two distinct personality traits: borderline personality and the psychopathic (or antisocial) tendencies represented by the timely construct of callous-unemotional traits (i.e., CU traits). Extant literature showed that borderline and psychopathic personality disorders could coexist in clinical and non-clinical samples of adolescents (Chabrol, Valls, Van Leeuwen, & Bui, 2012; Fonagy, 2000). So, we wanted to explore which of these personality disorders was more prevalent in gothic subculture. In the present study, we predicted that there were no significant differences between borderline personality and CU traits, considering that both well describe the emotional world of members of gothic subculture.

As for non-suicidal self-injury, we wanted to investigate its prevalence in members from gothic subculture; according to above-reported literature, we expected that a significant part of our participants recurred to these behaviours. Further, we explored whether the two aforementioned personality organizations were uniquely associated to non-suicidal self-injury in members from gothic subculture. Borderline and psychopathic personality principally differ in their symptomatic manifestation: greater distress and self-mutilative/suicidal behaviour mainly occur in borderline personality, while greater violence and antisocial behaviours in psychopathy (Walters & Heilbrun, 2010). Moreover, Presniak, Olson, and Macgregor (2010) found that in borderline personality defense mechanisms can be expressed through interpersonal dependency and a tendency to direct aggression toward the self, whereas in antisocial personality through egocentricity, interpersonal exploitation, and a tendency to direct aggression toward others. According to these, we predicted that borderline personality could show the strongest unique association to non-suicidal self-injury in members from gothic subculture.

Further, we aimed to test the psychological functions of non-suicidal self-injury behaviours in gothic subculture. To address this purpose we considered the four psychological functions for non-suicidal self-injury behaviours proposed by Martin and colleagues (2013; i.e., internal emotion regulation, external emotion regulation, social influence and sensation-seeking). We predicted that non-suicidal self-injury was accounted by the desire to regulate own emotions as an attempt to deal with the sense of derealization and alienation. Finally, we

investigated the unique associations between each function of non-suicidal self-injury behaviours and both borderline personality and psychopathic traits. This investigation was realized in an explorative manner, and specific hypotheses were not advanced.

## Material and methods

### *Participants and procedure*

The current debate on whether or not to identify specific subcultures, along with the fluidity and liquidity of stable identity models and lifestyles, recurs in the difficulty in identifying a representative sample of gothic subculture (Jasper, 2004; Muggleton & Weinzierl, 2003). Today, youth subcultures like gothic subculture identify themselves in terms of sharing specific music genres, lifestyles, behaviours, and relations (Scharf, 2011); in this context, meeting spaces, which can be 'local' (i.e., a venue that can be attended regularly) or 'translocal' (i.e., significant events, such as concerts, able to attract members of the subculture from different geographical areas), assume great significance (Hodkinson, 2002). Since the early 1980s, gothic subculture has developed and consolidated at important 'local' venues and 'translocal' events, such as 'The Batcave' in London and 'The Hellfire' in New York (Scharf, 2011). Otherwise it doesn't work to require a Goth to define himself/herself in a specific social category because, paradoxically, the typical response is 'I'm not a Goth' (Jasper, 2004), claiming his/her non-classification as an identity quality.

In Tuscany (Italy) we singled out an important gothic meeting (the 'Nuit de Sade') that takes place four times a year, drawing people from all over the country. A trained assistant recruited 77 partygoers individually before they entered the venue, and 51 young adults (66.2% of the total sample, 28 woman and 23 man, mean age = 26.20, SD = 4.61, range 18–37 years) accepted to participate in the study. The distribution of their level of education was: middle school  $n = 12$  (23.53%), high school  $n = 32$  (62.75%), university degree  $n = 7$  (13.73%); the distribution of their work status was: stable work  $n = 28$  (54.90%), precarious work  $n = 15$  (29.41%), unemployed  $n = 8$  (15.69%). They were asked to provide formal assent before completing the following tools near the trained assistant in a quiet location.

### *Measures*

#### *Borderline personality*

Following Chabrol and colleagues' methodology (2012), borderline personality was assessed using a self-report questionnaire composed of the nine items corresponding to the DSM IV TR criteria for borderline personality (e.g., 'I often wonder who I really am'; 'I am a very moody person'; 'I have difficulty controlling my anger and temper'). Items were scored on a dichotomous (yes/no) scale and

the rates of presence were expressed as percentages. In our sample, Cronbach's  $\alpha$  was = .64 and it was similar ( $\alpha = .69$ ) to that reported by the original scale by Chabrol et al. (2012). In our sample the rates of presence of each criterion ranged from 47.1 to 68.6%, except for two criteria ('Identity unstable self-image' and 'Affective instability') whose rates were respectively 39.8 and 35.3%. Considering the rates of presence of each criterion in community adult samples (Aggen, Neale, Røysamb, Reichborn-Kjennerud, & Kendler, 2009; Zanarini et al., 2011), rates in our sample tended to be higher for all criteria.

### *Psychopathic traits*

Psychopathic traits were examined using the Italian version of the Inventory of Callous-Unemotional Traits (ICU; Ciucci, Baroncelli, Franchi, Golmaryami, & Frick, 2014; Ciucci, Baroncelli, Golmaryami, & Frick, 2015). This 24-item self-report questionnaire includes three subscales assessing callous-unemotional traits, according to the original scale by Essau et al. (2006): Callousness (e.g., 'The feelings of others are unimportant to me'; Cronbach's  $\alpha = .76$ ), Uncaring (e.g., 'I try not to hurt others' feelings' – reversed; Cronbach's  $\alpha = .80$ ) and Unemotional (e.g., 'I hide my feelings from others'; Cronbach's  $\alpha = .76$ ). The participants used a 4-point Likert scale.

### *Self-injury behaviours*

A list of 17 non-suicidal self-injury behaviours was derived from Gratz (2001) (e.g., 'Have you ever intentionally [i.e., on purpose] cut your wrist, arms, or other area(s) of your body [without intending to kill yourself?]', 'Stuck sharp objects such as needles, pins, staples, etc. into your skin, not including tattoos, ear piercing, needles used for drug use, or body piercing?'). Participants answered on a dichotomous (yes/no) scale (Cronbach's  $\alpha = .79$ ).

### *Self-injury functions*

We used the Ottawa Self-Injury Inventory (OSI; Martin et al., 2013). It consists of 37 items on a 5-point Likert scale, distributed in four subscales: Internal Emotion Regulation (e.g., 'To produce a sense of being real when I feel numb and unreal'; 'To stop me from thinking about ideas of killing myself', Cronbach's  $\alpha = .79$ ); External Emotion Regulation (e.g., 'To release frustration', 'To release anger', Cronbach's  $\alpha = .70$ ); Social Influence (e.g., 'To belong to a group', 'To stop people from expecting so much from me', Cronbach's  $\alpha = .68$ ); Sensation Seeking (e.g., 'To provide a sense of excitement that feels exhilarating', 'To experience a "high" like a drug high', Cronbach's  $\alpha = .68$ ).

### *Data analysis*

First of all, a mean score was calculated for each measure; we inspected descriptive statistics of study variables and possible gender effects by means of *t*-tests for independent samples. Then, a MANOVA for repeated samples was used to

examine whether the participants' levels of the four considered personality traits (i.e., Borderline, Callousness, Uncaring, Unemotional) differed from each other; before performing this analysis, the four scales were ranged due to their different original possible range. Moreover, a second MANOVA for repeated samples was used to examine whether there were significant differences in the participants' levels of the four functions for non-suicidal self-injury behaviours (i.e., Internal Emotion Regulation, External Emotion Regulation, Social Influence, and Sensation Seeking). Next, by means of zero-order correlations and regression analyses (in which we controlled for gender and age effects), we investigated associations between personality traits and non-suicidal self-injury, and between non-suicidal self-injury and its functions. Lastly, we investigated associations between personality traits (i.e., borderline personality and CU traits) and each function of non-suicidal self-injury behaviours, once again by means of zero-order correlations and regression analyses.

## Results

Descriptive statistics are reported in Table 1. First of all, 27 out of 51 participants (52.94%) showed 5 or more symptoms related to borderline behaviours (i.e., the threshold indicated by DSM IV TR to receive a diagnosis of borderline personality disorder) while only 1 participant out of 51 (1.96%) reported no symptoms related to borderline behaviours. Moreover, 33 out of 51 participants (64.71%) reported that they had committed a non-suicidal self-injury at least once. No gender effects in the study variables emerged, with the exception of internal emotion regulation function ( $t = 2.427$ ,  $df = 49$ ,  $p < .05$ ), which was higher for females ( $M = .50$ ,  $SD = .29$ ) than for males ( $M = .31$ ,  $SD = .28$ ). The results of the first MANOVA indicated a significant difference across the four personality dimensions:  $F(3, 150) = 10.531$ ,  $\eta^2 = .17$ ,  $p < .001$ . Post-hoc pairwise comparison

**Table 1.** Descriptive statistics of study variables.

	Mean (SD)	Cronbach's $\alpha$	Observed range	Skewness-Kurtosis	Gender differences
1. Borderline	.53 (.25)	.64	.00–1.00	-.05, -.68	ns
2. ICU callousness	.72 (.55)	.76	.00–2.11	.75, -.35	ns
3. ICU uncaring	.88 (.59)	.80	.00–2.25	.67, -.35	ns
4. ICU unemotional	1.53 (.68)	.76	.00–3.00	.24, -.36	ns
5. Non-suicidal self-injury	.14 (.15)	.79	.00–.59	1.04, .32	ns
6. OSI internal emotion regulation	.42 (.30)	.79	.00–1.00	.36, -.86	F > M
7. OSI external emotion regulation	.57 (.38)	.70	.00–1.00	-.20, -1.43	ns
8. OSI social influence	.21 (.21)	.68	.00–.89	.99, .81	ns
9. OSI sensation seeking	.25 (.31)	.68	.00–1.00	1.09, .05	ns

Note: ICU = Inventory of Callous-Unemotional Traits; OSI = Ottawa Self-Injury Questionnaire.



tests with Bonferroni correction indicated that the participants reported higher levels of Borderline ( $M = .53, SD = .25$ ) and Unemotional ( $M = .51, SD = .23$ ) compared to Callousness ( $M = .34, SD = .26$ ) and Uncaring ( $M = .39, SD = .26$ ) traits. The results of the second MANOVA indicated significant differences across the four functions of non-suicidal self-injury:  $F(3, 150) = 22.977, \eta^2 = .32, p < .001$ . Post-hoc pairwise comparison tests with Bonferroni correction indicated that the participants reported higher levels of External Emotion Regulation function ( $M = .57, SD = .38$ ) followed by Internal Emotion Regulation function ( $M = .42, SD = .30$ ); the lower levels were showed for Sensation Seeking function ( $M = .25, SD = .31$ ) and Social Influence function ( $M = .21, SD = .21$ ).

As for personality traits and non-suicidal self-injury (see Tables 2 and 3), zero-order correlations revealed positive associations with Borderline ( $r = .50, p < .001$ ), Callousness ( $r = .37, p < .01$ ), and Unemotional ( $r = .39, p < .01$ ), even though regression analysis showed that non-suicidal self-injury was uniquely associated with Borderline ( $\beta = .40, p < .01$ ). Moreover, non-suicidal self-injury was positively correlated with both Internal ( $r = .44, p < .001$ ) and External ( $r = .35, p < .05$ ) Emotion Regulation functions, even though regression analysis revealed that in this sample non-suicidal self-injury was uniquely associated with Internal Emotion Regulation function ( $\beta = .50, p < .01$ ).

Considering the role of personality traits in each non-suicidal self-injury function (see Tables 2 and 4), Internal Emotion Regulation was positively associated with Unemotional ( $r = .32, p < .05$ ) and Borderline ( $r = .44, p < .001$ ), even though regression analysis revealed that Internal Emotion Regulation function was uniquely associated with the Unemotional ( $\beta = .30, p < .05$ ) trait. External Emotion Regulation function resulted positively associated with Borderline by both zero-order correlations ( $r = .47, p < .001$ ) and regression analysis ( $\beta = .40, p < .05$ ). Social Influence function resulted unrelated to any personality traits. Lastly, Sensation Seeking function resulted positively associated with

**Table 2.** Zero-order correlations (Pearson's  $r$ ) between study variables.

	1	2	3	4	5	6	7	8	9
1. Borderline	–								
2. ICU callousness	.36*	–							
3. ICU uncaring	.23	.56***	–						
4. ICU unemotional	.31*	.35*	.31*	–					
5. Non-suicidal self-injury	.50***	.37**	.26	.39**	–				
6. OSI internal emotion regulation	.44***	.19	.04	.32*	.44***	–			
7. OSI external emotion regulation	.47***	.10	–.02	.25	.35*	.68***	–		
8. OSI social influence	.02	.10	.04	–.03	.04	.45***	.39**	–	
9. OSI sensation seeking	.12	.40**	.17	.24	.26	.27	.31*	.26	–

Note: ICU = Inventory of Callous-Unemotional Traits; OSI = Ottawa Self-Injury Questionnaire.  
\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 3.** Regression analyses for non-suicidal self-injury as predicted by personality traits and by OSI functions.

	Standardized beta							<i>R</i> <sup>2</sup>	<i>F</i>
	Gender	Age	ICU callousness	ICU uncaring	ICU unemotional	Borderline			
Non-suicidal self-injury	.14	-.16	.15	-.01	.19	.40**	.26	<i>F</i> (6, 50) = 3.982**	
	Gender	Age	OSI internal emotion regulation	OSI external emotion regulation	OSI social influence	OSI sensation seeking	<i>R</i> <sup>2</sup>	<i>F</i>	
Non-suicidal self-injury	.33*	-.23	.50**	.08	-.21	.21	.25	<i>F</i> (6, 50) = 3.772**	

Note: ICU = Inventory of Callous-Unemotional Traits; OSI = Ottawa Self-Injury Questionnaire.  
\**p* < .05; \*\**p* < .01.

**Table 4.** Regression analyses for OSI functions as predicted by personality traits.

	Standardized beta							<i>R</i> <sup>2</sup>	<i>F</i>
	Gender	Age	ICU callousness	ICU uncaring	ICU unemotional	Borderline			
OSI internal emotion regulation	-.38*	.08	.15	-.09	.30*	.24	.26	<i>F</i> (6, 50) = 3.846**	
OSI external emotion regulation	-.21	.08	.00	-.12	.21	.40*	.19	<i>F</i> (6, 50) = 2.952*	
OSI social influence	-.37	.15	.20	.05	.00	-.13	.00	<i>F</i> (6, 50) = .763	
OSI sensation seeking	-.41*	.19	.48**	-.01	.21	-.17	.17	<i>F</i> (6, 50) = 2.733*	

Note: ICU = Inventory of Callous-Unemotional Traits; OSI = Ottawa Self-Injury Questionnaire.  
\**p* < .05; \*\**p* < .01.

Callousness by both zero-order correlations ( $r = .40, p < .01$ ) and regression analysis ( $\beta = .48, p < .01$ ).

## Discussion and conclusions

As for the individual characteristics in terms of personality traits, we hypothesized that both borderline and callous-unemotional traits were present in a sample of young adults from gothic subculture. Over half of gothic participants to the present study attributed a borderline personality to themselves confirming that the adherence to gothic subculture refers to the difficulty in exercising control over the internal and/or external reality and to face feelings of alienation, the central themes in this subculture (Van Elferen, 2007). Moreover, members of gothic subculture reported higher level of borderline and unemotional traits compared to callousness and uncaring traits. These results confirmed that our participants experienced a sense of alienation from social life in terms of emotional isolation rather than impairment in empathy and care for other people's feelings, that in literature are associated to externalizing problems (Ciucci et al., 2014).

As for non-suicidal self-injury, in accordance with both our hypothesis and previous evidences (Young et al., 2014), we found a consistent prevalence in our sample: specifically, nearly 65% of our sample reported having inflicted a non-suicidal self-injury at least once, whereas a large study by Brunner et al. (2014) on teenagers from European countries indicated a prevalence of 20.90% in Italy. Among the investigated dimensions of personality, borderline personality disorders resulted to account more than psychopathic tendencies for engaging non-suicidal self-injury behaviours, over and above the effects of gender and age. This result supported our hypothesis according to criteria of DSM IV TR. Interestingly, in this gothic sample, non-suicidal self-injury was associated with emotion regulation functions, rather than with sensation seeking and social influence functions; once again, these evidences highlight a difficulty concerning the experience of own emotional domain. Overall, these results indicated that in gothic subculture self-injury has the function of regulating emotion to maintain the integrity of the Self and it is related to the perception of a traumatic reality in which derealization coexists with extreme self-directed aggression.

A key advance of our study was that it investigated the unique association of personality traits (i.e., borderline and psychopathic tendencies) with each non-suicidal self-injury function; this was important in order to make an in-depth exploration of the specific meaning of each function in this sample of gothic young adults. First of all, the internal regulation of emotions was uniquely related to the unemotional component of psychopathic tendencies; this evidence indicated that deficient emotional activation may result in the need to find an alternative way to cope with emotional stimuli, and non-suicidal self-injury may represent an impulsively way to regulate the internal affective state. Conversely, higher levels of external regulation of emotion were uniquely

associated with borderline personality, suggesting that the use of non-suicidal self-injury to manage frustration and anger may be due to difficulty in exercising control over reality. Although association between sensation seeking function and callousness emerged, we skip it because these study variables have low scores in our sample.

Our findings confirm the existence of a close relationship between adherence to the gothic subculture in early adulthood and conditions of clinical interest: the prevalence of borderline personality disorder and of a deficient or dissimulated emotional affect, along with the engagement in non-suicidal self-injury behaviours for regulating own emotions; all these features describe gothic members, arising their social withdrawal and alienation. In contrast to what we could expect, our gothic sample has not been characterized by traits that indicated an attitude concerning uncaring toward others' emotions or lacking of empathy. While these results confirm the clinical interest for young adults belonging to the gothic subculture, it remains unclear their actual developmental risk. Specifically, our study provides a starting point to try to answer some questions about the nature of the relationships we found, which require further investigation. First, we wonder the extent to which the clinical problems presented by gothic subculture members reflect objective conditions, and the extent to which they may be fictional and exaggerated manifestations of their own Self-representation. For instance, non-suicidal self-injury may be a behavioural manifestations played at a symbolic level, a kind of social rite with cathartic functions (Favazza, 2011). This question leads directly to another one: the extent to which the adherence to gothic subculture strengthens and stabilizes personality traits of clinical interest (such as borderline personality and psychopathic tendencies) and related maladaptive behaviour (such as non-suicidal self-injury). As suggested by Arnett (1996), future work could confirm the hypothesis that adherence to gothic subculture does not have the same meanings and functions for all members, in other words there may be significant individual differences with regard to the processes that can be activated and implemented as a result of this membership.

### **Limitation**

Our results have to be considered in light of some limitations. The small sample claims to make conclusions with caution until confirmed by future studies; moreover, a low number of subjects did not allow us to make an in-depth consideration of the role of gender in the explored associations. Future works may want to compare males and females who are likely to be fascinated and involved by different aspects of gothic themes, as suggested by the two aforementioned music genres, the hypermasculine heavy metal and the hyperfeminine dark-wave (Baddeley, 2006; Scharf, 2011). Further, the participants were young adults

with a rather large age range; thus, similar study should be realized following adolescents involving in gothic style longitudinally so that developmental trajectories can be more clearly delineated. Finally, a limit in sample recruitment relies in not to have asked whether the participation in gothic events were episodic or regular.

As for measures, this study relied exclusively on self-assessment, although we think that it is the main source that should be used to address features related to personality differences and functions attributed to non-suicidal self-injury behaviour. As showed, our study highlighted a marked familiarity between gothic subculture and borderline personality. We can notice that the internal consistency of the self-report questionnaire used to assess these personality traits was low. This claims the need to operationalize the construct of borderline personality in an articulated manner, in order to accurately analyze the ways used by gothic members to face the siege against a hostile and out-of-control reality (Lasch, 1984).

## Disclosure statement

No potential conflict of interest was reported by the authors.

## References

- Aggen, S. H., Neale, M. C., Røysamb, E., Reichborn-Kjennerud, T., & Kendler, K. S. (2009). A psychometric evaluation of the DSM-IV borderline personality disorder criteria: Age and sex moderation of criterion functioning. *Psychological Medicine*, 39, 1967–1978.
- Arnett, J. J. (1996). *Metal heads. Heavy metal music and adolescent alienation*. Boulder, CO: Harper Collins.
- Baddeley, G. (2006). *Goth chic. A connoisseur's guide do dark culture*. London: Plexus.
- Bowes, L., Carnegie, R., Pearson, R., Mars, B., Biddle, L., Maughan, B., ... Heron, J. (2015). Risk of depression and self-harm in teenagers identifying with goth subculture: A longitudinal cohort study. *The Lancet Psychiatry*, 2, 793–800.
- Brunner, R., Kaess, M., Parzer, P., Fischer, G., Carli, V., Hoven, C. W., ... Wasserman, D. (2014). Life-time prevalence and psychosocial correlates of adolescent direct self-injurious behavior: A comparative study of findings in 11 European countries. *Journal of Child Psychology and Psychiatry*, 55, 337–348.
- Carrington, V. (2011). The contemporary gothic: Literacy and childhood in unsettled times. *Journal of Early Childhood Literacy*, 12, 293–310.
- Chabrol, H., Valls, M., Van Leeuwen, N., & Bui, E. (2012). Callous-unemotional and borderline traits in nonclinical adolescents: Personality profiles and relations to antisocial behaviors. *Personality and Individual Differences*, 53, 969–973.
- Ciucci, E., Baroncelli, A., Franchi, M., Golmaryami, F. N., & Frick, P. J. (2014). The association between callous-unemotional traits and behavioral and academic adjustment in children: Further validation of the inventory of callous-unemotional traits. *Journal of Psychopathology and Behavioral Assessment*, 36, 189–200.
- Ciucci, E., Baroncelli, A., Golmaryami, F. N., & Frick, P. J. (2015). The emotional correlates to callous-unemotional traits in children. *Journal of Child and Family Studies*, 24, 2374–2387.

- Cohen, S. C. (2002). *Folk devils and moral panics*. London: Routledge.
- Essau, C. A., Sasagawa, S., & Frick, P. J. (2006). Callous-unemotional traits in adolescents. *Assessment, 20*, 1–16.
- Favazza, A. (2011). *Bodies under siege. Self-mutilation, nonsuicidal self-injury, and body modification in culture and psychiatry*. Baltimore, MD: Johns Hopkins University Press.
- Fonagy, P. (2000). Attachment and borderline personality disorder. *Journal of the American Psychoanalytic Association, 48*, 1129–1146.
- Frick, P. J., & Ray, J. V. (2014). Evaluating callous-unemotional traits as a personality construct. *Journal of Personality, 83*, 710–722.
- Gratz, K. L. (2001). Measurement of deliberate self harm: Preliminary data on the deliberate self harm inventory. *Journal of Psychopathology and Behavioral Assessment, 23*, 253–263.
- Haenfler, R. (2013). *Goths. Gamers, Grrrls. Deviance and youth subcultures*. New York: Oxford University Press.
- Hodkinson, P. (2002). *Goth: Identity, style and subculture*. Oxford: Berg.
- Jasper, A. (2004). 'I am not a goth!' The unspoken morale of authenticity within the Dutch gothic subculture. *Etnofoor, 17*, 90–115.
- Kernberg, O. F. (1984). *Severe personality disorders: Psychotherapeutic strategies*. New Haven, CT: Yale University Press.
- Kilpatrick, N. (2005). *The Goth Bible. A compendium for the darkly inclined*. London: Plexus.
- Larivière, M. P. (2013). Borderline personality disorder in adolescents: The He-who-must-not-be-named of psychiatry. *Dialogues in Clinical Neuroscience, 15*, 171–179.
- Lasch, C. (1984). *The minimal Self: Psychic survival in troubled times*. New York, NY: Norton.
- Martin, S. (2002). Gothic scholars don't wear black: Gothic studies and gothic subcultures. *Gothic Studies, 4*, 28–43.
- Martin, J., Cloutier, P. F., Levesque, C., Bureau, J. F., Lafontaine, M. F., & Nixon, M. K. (2013). Psychometric properties of the functions and addictive features scales of the Ottawa self-injury inventory: A preliminary investigation using a university sample. *Psychological Assessment, 25*, 1013–1018.
- Mode, B., Ohlsson, H., Merlo, J., & Rosvall, M. (2013). Risk factors for diagnosed intentional self-injury: A total population-based study. *European Journal of Public Health, 24*, 286–291.
- Moore, R. (2004). Postmodernism and punk subculture: Cultures of authenticity and deconstruction. *The Communication Review, 7*, 305–327.
- Muggleton, D., & Weinzierl, R. (Eds.). (2003). *The post-subcultures reader*. Oxford: Berg.
- Nixon, M. K., & Heath, N. L. (2009). Introduction to nonsuicidal self-injury in adolescents. In M. K. Nixon & N. L. Heath (Eds.), *Self-injury in youth: The essential guide to assessment and intervention* (pp. 9–28). New York, NY: Routledge Press.
- Presniak, M. D., Olson, T. R., & Macgregor, M. W. (2010). The role of defense mechanisms in borderline and antisocial personalities. *Journal of Personality Assessment, 92*, 137–145.
- Punter, D. (1996). *The literature of terror. A history of gothic fictions from 1765 to the present day*. London: Longman.
- Rutledge, C., Rimer, D., & Scott, M. (2008). Vulnerable Goth teens: The role of schools in this psychosocial high-risk culture. *Journal of School Health, 78*, 459–464.
- Scharf, N. (2011). *Worldwide gothic. A chronicle of a tribe*. Schropshire: Independent Music Press Studies.
- Van Elferen, I. (Ed.). (2007). *Nostalgia or perversion? Gothic rewriting from the eighteenth century until the present*. Newcastle: Cambridge Scholars Publishing.
- Walters, G. D., & Heilbrun, K. (2010). Violence risk assessment and facet 4 of the psychopathy checklist: Predicting institutional and community aggression in two forensic samples. *Assessment, 17*, 259–268.

- Young, R., Sproeber, N., Groschwitz, R. C., Preiss, M., & Plener, P. L. (2014). Why alternative teenagers self-harm: Exploring the link between non-suicidal self-injury, attempted suicide and adolescent identity. *BMC Psychiatry*, *14*, 137.
- Zanarini, M. C., Horwood, J., Wolke, D., Waylen, A., Fitzmaurice, G., & Grant, B. F. (2011). Prevalence of DSM-IV borderline personality disorder in two community samples: 6,330 English 11-year-olds and 34,653 American adults. *Journal of Personality Disorders*, *25*, 607–619.