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The role of Dysfunctional Personality Features and Adult Attachment Style in Predicting ICD-11 Trauma Related Disorders in a Community-dwelling Sample

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Abstract

Background. General population studies have shown that a large portion of people in developed countries have been exposed to at least one traumatic event in their lifetime. However, the development of trauma-related disorders (Post Traumatic Stress Disorder/Complex Post Traumatic Stress Disorder) is relatively rare. Thus, the evaluation and the early identification of trauma related disorders risk factors represent a relevant topic. The present study was aimed at investigating if dysfunctional personality traits and attachment styles represent risk factors for meeting the criteria of trauma-related disorders.

Methodology. In a sample of 552 Italian community-dwelling adult participants we administered the International Trauma Questionnaire, the Personality Inventory for DSM-5-BF and the Attachment Style Questionnaire. Three hundred-sixty-five participants reported one or more traumatic experiences according to ICD-11 operationalization.

Results. In our sample, the prevalence of trauma related disorders was 14.5%. Females and younger participants were significantly more likely to develop trauma related disorders. Moreover, the hierarchical logistic regression models showed that high level of Negative Affectivity and an anxious/ambivalent adult attachment style (Preoccupation with Relationship) increased the risk to meet trauma related disorders criteria. Finally, when we considered as covariates Negative Affectivity and Preoccupation with Relationship, only Negative Affectivity remained a significant predictor.

Conclusion. As a whole, these results suggested the importance of dysfunctional personality features in trauma related disorders risk. In addition, an insecure attachment style characterized by an anxious and dependent approach to relationships represents a relevant aspect in order to prevent trauma related disorders.

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1. Introduction

The 11th revision to the World Health Organization's International Classification of Diseases (ICD-11, WHO, 2018) proposes two distinct disorders, Posttraumatic Stress Disorder (PTSD) and Complex PTSD (CPTSD); they were considered sibling disorders since both diagnoses arise from the broad category of stress-related disorders. According to the classification of ICD-11, PTSD includes six symptoms measuring three clusters (each cluster composed of two symptoms): (1) re-experiencing traumatic events in the present (Re), (2) avoidance of traumatic reminders (Av), and (3) a persistent sense of threat that is manifested by increased arousal and hypervigilance (Th). PTSD is considered as a response characterized by some degree of fear or horror directly related to either a specific traumatic event or series of events (Brewin et al., 2017). CPTSD is conceptualized as a broader diagnosis that may result from sustained, repeated, and multiple forms of traumatic exposures (e.g., childhood abuse, domestic violence; political imprisonment) (Brewin et al., 2017). The diagnosis of CPTSD (ICD-11, WHO, 2018) requires that all the diagnostic criteria of PTSD are met, and it includes three additional clusters that reflect 'disturbances in self-organization' (DSO): affective dysregulation (AD), negative self-concept (NSC), and disturbed relationships (DR) (Maercker et al., 2013).

Exposure to traumatic events is a necessary prerequisite for the diagnosis of both PTSD and CPTSD. General population studies have shown that a large proportion of people in developed countries have been exposed to at least one traumatic event in their lifetime. In particular, a general population survey (Benjet at al., 2016), carried out in 24 countries, found that 70.4% of individuals had experienced at least one traumatic life event and 52.3% have experienced two or more traumatic life events. Although exposure to potentially traumatic events is common, the development of trauma-related disorders is relatively rare. Previous findings, based on general population samples and self-report assessment methods, reported that the prevalence of ICD-11 PTSD and CPTSD ranges from 1.5% to 9.0% for PTSD and from 0.5% to 7.7% for CPTSD, respectively (Hyland et al., 2020). Thus, the evaluation and the early identification of trauma-related disorders risk factors represent relevant topics in order to implement appropriate preventive strategies.

Previous data identified several psychosocial and demographic risk factors for PTSD and CPTSD diagnoses. In particular, women seemeed to be more susceptible to experience PTSD and CPTSD compared to men (Hyland et al., 2020; Hyland et al., 2017a) even when the trauma history was controlled for (Cloitre et. al., 2019); in contrast being unemployed and unmarried (Karatzias et al., 2017), were associated with CPTSD, but not PTSD (Hyland et al., 2020). The

exposure to interpersonal abuse during early development (Hyland et al., 2017b), as well as childhood sexual abuse (Hyland et al., 2017b; Karatzias et al., 2017), and exposure to multiple forms of childhood traumatization (Cloitre et al., 2013; Hyland et al., 2017b; Karatzias et al., 2017), were associated to an increased likelihood of a complex psychological response to trauma. On the other hand, PTSD was more likely to occur in individuals who have experienced a single-incident, adult traumatic exposure (Cloitre et al., 2013) and repeated exposure to the same trauma (Glück et al., 2016; Hyland et al., 2017b). Moreover, CPTSD represents a more disabling disorder than PTSD (Brewin et al., 2017) and it requires specific clinical treatments (Cloitre et. al., 2014).

Among the predisposing factors for trauma related disorders, the tendency to feel, perceive, behave and think in relatively consistent ways across time and situations (namely, personality traits, Bach et al., 2015) seems to play a significant role. For example, they seem to influence perceived stress level following traumatic experiences (Reis et al., 2016; Madamet et al., 2018) and coping strategies (Yin et al., 2019). Moreover, personality traits may influence PTSD symptoms expression (Contractor et al., 2016; Thomas et al., 2014; Miller, 2003), severity (Thomas et al., 2014) and course (Yin et al., 2019; Thomas et al., 2014). Regardless the study approach, negative emotionality and neuroticism were positively associated with PTSD symptoms (e.g., Brodaty et al., 2004; Wu et al., 2011; Parslow et al., 2006; Jaksic et al., 2012) and they seemed to represent potential vulnerability factors for developing PTSD and long-term PTSD (Yin et al., 2019). Furthermore, other evidence showed that PTSD was positively related to harm avoidance (Jaksic et al., 2012; Richman & Frueh, 1997), novelty seeking (Jaksic et al., 2012; Gil, 2005), self-transcendence (Jaksic et al., 2012; North et al., 2008), as well as individual traits of hostility / anger (Jaksic et al., 2012; van Zuiden et al., 2011; Heinrichs et al., 2005; Ouimette et al., 2004) and anxiety (Jaksic et al., 2012; Marais & Stuart, 2005; Collimore et al., 2008; Hovens et al., 1994; Hensley & Varela, 2008). Conversely, PTSD is negatively associated with extraversion (e.g., Fauerbach et al., 2000; Lauterbach & Vrana, 2001; Campbell-Sills et al., 2006), conscientiousness (Campbell-Sills et al., 2006), self-direction (Ghazinour et al., 2003; North et al., 2008) and with a combination of high positive emotionality and low negative affectivity (Kunst, 2011), as well as with specific personality traits such as resistance (King et al., 1998) and optimism (Thomas et al., 2011).

Taking into consideration internalizing and externalizing personality traits, previous studies (Miller 2003, 2004; Miller et al., 2003, 2004, 2008; Wolf et al., 2010, 2012) have identified at least two corresponding personality-based subtypes of PTSD. The internalizing subtype is defined by high negative emotionality and low positive emotionality and it is highly associated with

depression, panic and with schizoid and avoidant personality features. The externalizing subtype is primarily characterized by high negative emotionality and a lack of inhibition and it is highly associated with substance use disorders, antisocial personality disorder (PD), and borderline PD. In line with these results, Miller and Resick (2007) showed that temperament scale profiles of female sexual assault survivors with internalizing symptoms of CPTSD were characterized by high scores on schizoid and avoidant PDs measures, whereas the externalizing symptoms were associated with disinhibition, substance dependence, and Cluster B PD features.

Adult attachment seems to represent another factor that has been associated with increased risk of trauma related disorders (Woodhouse et al., 2015; Karatzias et al., 2021). The associations between adult attachment style and PTSD have been observed in different samples (war prisoners, veterans, victims of domestic violence, see Woodhouse et al., 2015). A meta-analytic study showed a medium association between secure attachment style and low PTSD symptoms and a medium association between insecure attachment and high PTSD symptoms (Woodhouse et al., 2015). Specifically, the strongest relationship was the one between fearful attachment and PTSD symptoms, followed by the one between anxious attachment style and PTSD symptoms. In line with these findings, a recent review (Barazzone et al., 2019) suggested that an insecure adult attachment seems to enhance the vulnerability to meet PTSD diagnostic criteria. Moreover, some authors (Huang et al., 2017; Mikulincer et al., 2011) found that interpersonal traumatic events were more strongly related with attachment insecurity compared to non-interpersonal traumatic events.

Up to date, most of the studies on this topic have focused on the relationship between adult attachment and PTSD, on the contrary only two studies have investigated the associations between CPTSD and attachment styles (Karatzias et al., 2018; Karatzias et al., 2021). As a whole, these studies, carried out in trauma exposed clinical samples, suggested that DSO symptoms, but not PTSD symptoms, were negatively related to secure attachment and positively related to the fearful dimension of insecure attachment (Karatzias et al., 2021).

1.1 The current study

Starting from these considerations, the present study was carried out in Italian community-dwelling adult participants that were exposed to traumatic events according to ICD-11 operationalization (Brewin et al., 2017) and it aimed to investigate if dysfunctional personality traits and attachment styles represent risk factors for meeting the criteria of trauma related disorders (i.e., PTSD or CPTSD).

In order to evaluate dysfunctional personality traits, we relied on the Alternative Model of Personality Disorders (AMPD) of the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5, APA, 2013). This model represents a synthesis of existing dimensional models of personality pathology, focused on maladaptive variants of personality traits. (e.g, Clark, 2007; Widiger et al., 2005). To our knowledge, few studies evaluated the association between trauma-related disorders and dysfunctional personality traits as listed in the Section III of DSM-5, (APA, 2013). However, previous data suggested that AMPD traits show similar associations to the internalizing dimension of psychopathology as FFM traits (Hyatt et al., 2021; Sleep et al., 2018). In particular, James and colleagues (2015) showed that the personality profile of veterans with PTSD compared to control veterans was primarily characterized by Detachment and Negative Affectivity domains, mostly underlying the internalizing dimension, followed by Disinhibition, Psychoticism, and Antagonism in that order of relative importance.

In line with previous researches (see for example Karatzias et al., 2021; Huang et al., 2020; O'Connor & Elklit, 2008), the present study evaluated adult attachment considering both romantic and peer-to-peer relationships. This attachment model assumes that adult relationships reactivate the infancy attachment patterns (Barazzone et al., 2019; Bowlby, 1980).

2. Methods

2.1 Participants

Five hundred fifty-two Italian community-dwelling adults agreed to participate in the study after responding to online advertisements from April 2020 to May 2020. Three hundred and eighty-eight were female (70.3%) and 164 (29.7%) were male, participant's mean age was 32.68, SD=15.20. One hundred and forty-five participants who did not report one or more traumatic events during their lifetime according to the ICD-11 operationalization were excluded. Moreover, the events indicated by 42 participants were not considered as traumatic events according to the ICD-11 operationalization. Thus, the final sample was composed of 365 participants. Participants that did not report traumatic events did not differ from participants who experienced traumatic events according to the ICD-11 operationalization on gender ($\chi^2(1) = 2.62, p > .27$), or age ($t(550) = -1.79, p > .05$) and years of education ($t(550) = .10, p > .05$). The final sample included 257 (70.4%) women and 108 (29.6%) men; participants' mean age was 33.55 years, SD = 15.91. The work profile of the sample was as follows: 144 (39.5%) students, 126 (34.5%) office workers, 35 (9,6%) self-employed professionals, 23 (6.3%) retirees, 10 (2.7%) laborers and 9 (2.5%) managers. Finally, 7 (1.9%) participants were housewives and 11 (3%) unemployed. With regard to the level of education, 11 participants (3%) reported junior

high school degree, 157 participants (43%) reported high school degree, and 293 participants (53.7%) reported university degree. Table 1 lists the type of traumatic experiences and the time in which they occurred.

Table 1. Type of traumatic experiences and the time in which they occurred (n=365).

Type of Traumatic Events, n %	
Natural catastrophes	27 (7.4)
War	2 (0.5)
Terroristic Acts	5 (1.4)
Fire	20 (5.5)
Physical Assault	52 (14.2)
Life-Threatening Illness	112 (30.7)
Sexual Abuse	27 (7.4)
Physical Abuse	33 (9)
Psychological Abuse	87 (23.8)
Time when traumatic events occurred, n %	
Less than 6 months	39 (10.7)
6-12 months	20 (5.5)
1-5 years	89 (24.4)
5-10 years	85 (23.3)
10-20 years	64 (17.5)
More than 20 years	59 (16.2)
Missing	9 (2.5)

2.2 Procedures

Before being administered the International Trauma Questionnaire (ITQ; Cloitre et al., 2018), participants were asked to report if they had experienced traumatic events based on the following definition: any extremely threatening or horrific event or series of events or situations either short- or long-lasting (Brewin et al., 2017). If participants positively answered this criterion, they were asked to report the specific event. Specifically, participants were asked to report if they had experienced one or more of the following traumatic events: diagnosis of a life-threatening illness, sudden death of a close person/close person diagnosed with a life-threatening illness, exposure to wars and natural catastrophes, exposure to terroristic acts, aggression experiences, accidents, sexual abuse, physical abuse, psychological abuse. They were also asked to describe the specific event (the latest event in the case of multiple events) and the time when traumatic events occurred.

Two independent raters evaluated if an event reported by participants could be considered as traumatic according to the ICD-11 operationalization. In the present study the inter-rater reliability for the presence of any traumatic event was adequate, Cohen's k =.90, p<.001.

All participants volunteered to take part in the study and provided a written informed consent for participation after a complete and extensive description of the current research. None of the participants received an incentive for participating. The study was conducted in line with the Ethical Principles of Psychologists and Code of Conduct.

2.3 Measures

International Trauma Questionnaire (ITQ; Cloitre et al., 2018).

The ITQ, a measure developed in order to evaluate ICD-11 PTSD and complex PTSD disorders, is a self-report questionnaire that includes 12 items scored on a Likert-type scale. The ITQ asks participants to indicate if they have experienced one or more traumatic events during their lifetime and to describe them. The participants also have to indicate when the traumatic experience occurred. The ITQ is composed of six items related to PTSD and six items related to DSO. Each symptom in the PTSD symptom cluster (re-experiencing in the here and now, avoidance, and sense of current threat) include two items; similarly, the ITQ presents two items for each DSO symptom cluster (i.e., affective dysregulation, negative self-concept, and disturbances in relationships). Three impairment items are listed for both PTSD and DSO, as they are required in order to achieve a categorical assessment of the syndromes. According to standard practice in trauma research (Karatzias et al., 2017), item scored ≥ 2 (Moderately) should be employed to determine the presence of a symptom (Cloitre et al., 2018). Cloitre and colleagues (2018) showed that the factor model based on six first-order factors and two second-order factors (namely PTSD and DSO) represented the best-fitting model for the 12-item ITQ correlation matrix in confirmative factor analysis. According to Somma and colleagues (2019), the Italian version of the ITQ demonstrated that the a priori model of item-to-scale assignment of the ITQ items was consistently reproduced in both trauma-exposed and non-trauma-exposed participants, even when measurement invariance was formally assessed. In this study, we employed the Italian version of the ITQ (Somma et al., 2019), and we relied on the categorical diagnosis of PTSD and complex PTSD. We computed Cronbach's α estimates for Likert-type items. The Cronbach's α values were .87 for PTSD and .90 for CPTSD.

Personality Inventory for DSM-5 Brief Form (PID-5-BF, Krueger et al., 2013a).

The PID-5-BF (American Psychiatric Association, 2013b) is a 25-item self-report that was developed to assess the five DSM-5 Section III domain dimensions of Negative Affectivity, Detachment, Antagonism, Disinhibition, and Psychoticism. Each domain scale consists of 5 items and each PID-5-BF item is scored on only one PID-5-BF domain scale. The PID-5-BF items come from the 220-item self-report PID-5. As in the PID-5, each PID-5-BF item is rated on a 4-point scale (i.e., 0 = very false or often false; 1 = sometimes or somewhat false; 2 = sometimes or somewhat true; 3 = very true or often true). Different from other versions of the PID-5, the PID-5-BF yields a score for the overall measure (American Psychiatric Association, 2013b). In the current study Cronbach's α values were .60 for Negative Affectivity, .68 for Detachment, .60 for Antagonism, .76 for Disinhibition, and .69 for Psychoticism.

Attachment Stile Questionnaire (ASQ, Feeney et al., 1994)

The ASQ is a 40-item questionnaire developed to measure five dimensions of adult attachment and is composed of five scales: Confidence in Self and Others (8 items), Discomfort with Closeness (10 items), Relationships as Secondary (7 items), Need for Approval (7 items), and Preoccupation with Relationships (8 items). Items were scored on a 6-point Likert-type scale ranging from "totally disagree" to "totally agree." For each subscale, the participant's

score is the sum of the items that make up that scale. Discomfort with Closeness is a theme central to Hazan and Shaver's (1987) conceptualization of avoidant attachment, whereas Relationships as Secondary is consistent with Bartholomew's (1990) concept of dismissing attachment. Need for Approval reflects respondents' needs for acceptance and confirmation from others and characterizes Bartholomew's (1990) fearful and preoccupied groups. Preoccupation with Relationships, which involves an anxious and dependent approach to relationships, is a core feature of Hazan and Shaver's (1987) original conceptualization of anxious/ambivalent attachment. Finally, Confidence in Self and Others reflects a secure attachment orientation. Reliability and validity data have been provided for both English (Feeney et al., 1994) and Italian (Fossati et al., 2003) versions of the ASQ. In the present study the ASQ scales showed adequate values of internal consistency: α = .74, .79, .71, .78, .78 for Confidence, Discomfort with Closeness, Relationships as Secondary, Need for Approval and Preoccupation with Relationships, respectively.

2.4 Statistical Analysis

We performed chi-square analyses to test the associations between the trauma related disorders group and gender to identify the predictors to enter in binary logistic regression analyses. We used chi-square tests of independence with Yates's correction for continuity on 2x2 contingency tables, and we computed odds ratios. Moreover, Student's t test for independent samples were used to evaluate the associations between trauma related disorders and continuous measures (age, ASQ scales and PID-5-BF domains). The nominal significance level (i.e., $p < 0.05$) was corrected according to the Bonferroni procedure for multiple comparisons. We computed three binary hierarchical logistic regressions in order to identify predictors of trauma related disorders. In the first regression model we entered trauma related disorders as dependent variable and PID-5-BF domains as predictors. In the second model we used ASQ scales as predictors. In both regression models, we entered as independent variables the scales that had showed significant bivariate associations with trauma related disorders Finally, we tested a logistic regression model with PID-5-BF domains and ASQ scales as predictors. In all regression analyses the participant's age and gender were entered in the first step.

3. Results

The prevalence of PTSD was 6.3% ($n = 23$, 95% CI 4.1 %, 9.1%) and the prevalence of CPTSD was 8.2% ($n = 30$, 95% CI 5.5%, 11.1%). The overall prevalence of trauma related disorders was 14.5% ($n = 53$, 95% CI 11.1 %, 18.4%). Women were significantly more likely than men to meet diagnostic criteria for trauma related disorders: $\chi^2(1) = .7.09$, $p = < .01$, odds ratios = .32, 95% CI [.14, .73], $\varphi = .15$. Moreover, participants that met diagnostic criteria for trauma related disorder were younger than those who did not meet diagnostic requirements for PTSD and CPTSD (t (363) = 2.99, $p < .001$, $d = .30$).

Mean comparisons between trauma related disorders and NO trauma related disorders groups on the PID-5-BF personality domain scales and ASQ scales are summarized in Table 2. The trauma related disorder group showed significantly higher mean scores than the NO trauma related disorders group in all PID-5-BF domain scales. Considering ASQ scales, participants in the trauma related disorders group scored higher in Need for Approval and Preoccupation with Relationship scales.

Table 2. Personality Inventory for DSM-5-BF domain scales and Attachment Style Questionnaire scales: Mean comparisons between participants with trauma related disorder (n = 53) and with NO trauma related disorders (n =312), respectively.

	M	*SD*	*t*	*d*
Personality Inventory for DSM-5-BF				
Negative Affectivity				
No trauma sample	1.14	0.58	-5.44*	-.80
Trauma sample	1.61	0.48		
Detachment				
No trauma sample	0.72	0.54	-4.42*	-.65
Trauma sample	1.10	0.71		
Antagonism				
No trauma sample	0.61	0.47	-30.1*	-.44
Trauma sample	0.82	0.51		
Disinhibition				
No trauma sample	0.77	0.61	-3.13*	-.46
Trauma sample	1.07	.081		
Psychoticism				
No trauma sample	0.80	0.57	-4.59*	-.68
Trauma sample	1.20	0.70		
Attachment Style Questionnaire				
Confidence				
No trauma sample	31.89	5.48	2.45	0.36
Trauma sample	29.85	7.01		
Discomfort with Closeness				
No trauma sample	37.14	7.84	-2.52	-0.37
Trauma sample	49.07	9.08		
Relationship as Secondary				
No trauma sample	15.36	4.88	-1.24	-.14
Trauma sample	16.26	5.90		
Need for Approval				
No trauma sample	21.63	6.60	-4.39*	-0.59
Trauma sample	25.78	6.26		
Preoccupation with relationships				
No trauma sample	28.54	6.79	-5.11*	-0.75
Trauma sample	33.66	7.14		

Note. The nominal significance level (i.e $p < 0.05$) was corrected according to the Bonferroni procedure and set to $p < 0.005$

*$p < 0.005$.

We entered as covariates in the logistic regression model the PID-5-BF domains and ASQ scales that showed significant associations with the trauma related disorders group.

We next conducted a binary hierarchical logistic regression analysis to evaluate the contribution of each PID-5-BF domain in significantly differentiating trauma related disorders participants from NO trauma related disorders participants over and above the effect of participant's gender and age. In the model that considered only the gender and age as covariates, the χ^2 Hosmer-Lemeshow goodness of fit test was 10.87, $p = .21$ and the Nagelkerke's R^2, an estimate of how much of the variance of the dependent variable was explained by the model, was .08. In the

final model, the Hosmer-Lemeshow goodness of fit test indicated a satisfactory fit ($\chi^2(8) = 4.70$, $p = .79$). The value of Nagelkerke's R^2, was .22. Negative Affectivity was a significant predictor of the trauma related disorders group adding an amount of further information in correctly identifying participants with trauma-related disorders (Wald's $\chi^2(1) = 4.37$, $p < .05$, Exp (B)= 2.27, 95% CI [1.05 – 8.13].

When we entered as covariates into a hierarchical logistic regression the ASQ scales that showed significant bivariate association with the trauma related disorders group (i.e., Need for Approval and Preoccupation with Relationships), the Hosmer-Lemeshow goodness of fit test suggested an adequate fit ($\chi^2(8) = 3.13$ $p = .93$). The model explained the 16% of the variance of the dependent variable (Nagelkerke's $R^2 = .16$). An anxious and dependent approach to relationship (namely Preoccupation with Relationships) resulted a significant predictor (Wald's $\chi^2(1) = 6.06$, $p < .05$, Exp (B)= 1.07, 95% CI [1.01 – 1.13] over and above gender and age.

Finally, we performed a logistic regression model with Negative Affectivity and Preoccupation with Relationships as covariates in predicting trauma related disorders controlling for the effect of participant's age and gender. The Hosmer-Lemeshow goodness of fit test of the final model indicated a satisfactory fit ($\chi^2(8) = 5.73$ $p = .68$). The value of Nagelkerke's R^2 was .20. Only Negativity Affectivity remained a significant predictor: Wald's $\chi^2(1) = 10.11$, $p < .005$, Exp (B)= 3.12, 95% CI [1.55 – 6.31].

4. Discussion

The aim of the present study was to investigate if dysfunctional personality domains and adult attachment styles represent relevant risk factors for trauma related disorders in a sample of community-dwelling adults.

In our sample, 365 participants (66%) were exposed to one or more traumatic event in their lifetime, in line with Benjet et al. (2016), who had found that 56.1% of Italian population had experienced at least one traumatic event, and with European data (Hyland et al., 2020). Moreover, in our sample, the prevalence of trauma related disorders (PTSD and CPTSD) was similar to Hyland and colleagues (2020) who found a prevalence of trauma related disorders of 12.7%, with 5.0% for PTSD and 7.7% for CPTSD. Thus, our data confirmed that among people exposed to traumatic events the development of trauma related disorders is relatively rare. These findings suggested the relevance to investigate sociodemographic and psychological risk factors for trauma related disorders in order to implement early interventions for individuals exposed to traumatic events.

Several predisposing factors for trauma related disorders were studied in literature (see for example Hyland et al., 2020; Marshall & Frazier, 2019; Karatzias et al., 2021; Yin et al., 2019). In the current research, we found that females and younger participants were significantly more likely to develop trauma related disorders. These results seem to support the role of gender and age as risk factors for PTSD and CPTSD (Hyland et al., 2020; Carmassi et al., 2014; Besser et al., 2009). Regarding the role of gender, several studies suggested that females are more vulnerable to meet trauma related disorders criteria (Karatzias et al., 2019; Ben–Ezra et al., 2018), as they assumed a relevant contribution of biological features such as hormonal factors (Kajantie & Phillips, 2006). Beyond biological factors, Olff and colleagues (2007) dispute that women may experience more strongly a sense of threat, peritraumatic dissociation or poor social support. Concerning youth as a risk factor for trauma related disorders, recent literature points out the impact on mental health of traumatic or adverse experiences at younger age (Zerach & Elklit, 2020).

When we evaluated the contribution of PID-5-BF personality dimensions, the personality dysfunctional domains seemed to add an amount of further information in the hierarchical logistic regression model in correctly identifying participants with trauma-related disorders over and above the effect of participants' gender and age. In particular, Negative Affectivity, as listed in DSM-5 Section III, resulted to be a significant predictor of the trauma-related disorders group. In our sample, high level of Negative Affectivity increased the risk to meet trauma related disorders criteria by 2.27 times. These data are consistent with James and colleagues (2015) personality profile of veterans with PTSD and with a recent study (Klein et al., 2021) that showed that negative affectivity and lower-order anxiousness differentiated individuals with PTSD from individuals with mood disorders. Moreover, previous studies reported a significant association between PTSD symptoms and constructs partly overlapping with Negative Affectivity such as negative emotionality (Thomas et al., 2014; Jaksic et al., 2012) or neuroticism (Yin et al., 2019; Madamet et al., 2018; Holeva & Tarrier, 2001). In addition, other data (Miller & Resik, 2007) showed that internalizing personality traits such as "the tendency to experience frequent and intense high levels of a wide range of negative emotions and their behavioural and interpersonal manifestations" (APA, 2013) represent a vulnerability factor for meeting PTSD and CPTSD criteria, thus impairing individuals' response to traumatic events and their ability to cope with stressful situations (Yin et al., 2019).

When we performed a logistic regression model entering the ASQ Need for Approval and Preoccupation with Relationships scales as predictors, only Preoccupation with Relationships

resulted a significant predictor for the trauma related disorders group. This attachment style involves an anxious and dependent approach to relationships and seems to be a core feature of Hazan and Shaver's (1987) original conceptualization of anxious/ambivalent attachment. Our results seem to provide more evidence that insecure attachment increases the risk for trauma disorders, as described by previous research demonstrating that anxious attachment was associated to PTSD symptoms (Ferrajao et al., 2017; Woodhouse et al., 2015) and that fearful attachment was positively associated to DSO symptoms (Karatzias et al., 2021). These data further suggest that individuals with anxious/ambivalent attachment styles could be predisposed to be afraid of not finding social support when facing traumatic events (Karatzias et al., 2021; Barazzone et al., 2019; Marshall & Frazier, 2019; Mikulincer et al., 2006), thus leading to difficulties in seeking help from other people and in managing trauma related symptoms (Huang et al., 2020; Zerach & Elklit, 2020; Woodhouse et al., 2015; Besser et al., 2009).

When we performed a final regression model considering as covariates Negative Affectivity and Preoccupation with Relationship in predicting trauma related disorders, only Negative Affectivity remained a significant predictor. This result suggested that, at least in our sample, this dysfunctional personological dimension represents a relevant risk factor for meeting trauma related disorders criteria. Taken as a whole, our data suggest the importance to evaluate as a first step the dysfunctional personological features of individuals exposed to traumatic events in order to preventively identify those who are at risk to develop trauma related disorders.

4.1 Limitations

Our results should be considered in the light of several limits. First, the small size of the sample that meets trauma related disorders criteria (i.e., PTSD/CPTSD) limits the generalizability of the results, and it allows us to make only preliminary conclusions that need further investigation. Future studies on larger samples of individuals with PTSD/CPTSD symptoms are needed.

Second, our sample was composed of adults who volunteered to participate in the study; this represents more a convenient study group than a random sample. We had administered only self-report questionnaires for both independent and dependent variables; method effects may have spuriously biased our findings. In addition, the prevalence of trauma related disorders was based on a self-report measure (i.e., ITQ), thus it could be higher than estimates obtained with clinician administered interviews. We used a single measure for each construct; this limits the generalizability of the results. Moreover, the cross-sectional design of our study does not allow us to determine the direction of causal relationships: for example, it is difficult to ensure the

degree of the impact of traumatic events on attachment style and vice versa. Longitudinal studies are needed in order to clarify this issue.

Despite these limits, the present study highlights the importance of dysfunctional personality features in trauma related disorders risk. In addition, at least in our sample of community – dwelling adults an attachment style characterized by an anxious and dependent approach to relationships represents a relevant aspect in order to prevent trauma related disorders.

Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any potential conflict of interest.

Authors Contribution

BS: Conceptualization, data collection, analysis and interpretation of data, writing -original draft

RG: analysis and interpretation of data, writing -original draft

ME: analysis and interpretation of data, writing -original draft

FC: writing - review & editing

VG: review & editing

FA: revising article critically, supervision.

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