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Parental Overcontrol and Dissociative Amnesia:  
a cross-sectional study

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## ABSTRACT

Dissociative amnesia is a Dissociative Disorders characterized by the inability to recall important autobiographical information that should be successfully stored in memory and ordinarily would be readily remembered, that affect individuals' psychological well-being. While child maltreatment (i.e. physical, emotional, sexual abuse and physical, emotional neglect) has been identified as a risk factor for Dissociative Disorders, there is a lack of research investigating the impact of parental overcontrol, a form of child maltreatment upon which just recently light has been shed. This study investigates the relationship between parental overcontrol and dissociative amnesia in a community sample of adults, controlling for other symptoms of dissociative disorders, other forms of child maltreatment and other potentially confounding variables. 714 adults (508 females; mean age:  $30.29 \pm 11.67$  years; age range: 18–77) answered an online survey which included a socio-demographic questionnaire, the Childhood Trauma Questionnaire Short Form (CTQ-SF), the Dissociative Experiences Scale - II (DES-II) and the parental overcontrol subscale of the Measure Of Parenting Style (MOPS). Statistical analyses included descriptive statistics, Spearman *rho* correlations and linear regression. The results indicate that maternal overcontrol is independently associated with dissociative amnesia ( $\beta = 0,067$ ,  $p = .022$ ). While more research and longitudinal studies are needed to better explore and confirm the results found on this survey, this data highlight the urge to take more into consideration parental overcontrol in relationship with Dissociative Amnesia, in research and clinical fields.

## **INTRODUCTION**

### **1.1 The Dissociative Disorders**

Pathological dissociation is a complex psychopathological condition. Symptoms of dissociation are encountered in lots of mental disorders, but dissociative disorders (DDs) are a specific cluster (Lyssenko et al., 2018). The dissociative disorders are described in DSM-V, defined by a “discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behavior” (Spiegel et al., 2013): summarizing, a disintegration of the normal functioning of an integrated mind. In DSM-IV, the previous edition, were defined as a “disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment” (APA, 1994). Is evident how DSM-V enriched the definition of dissociative disorders (DDs) highlighting a discontinuity in emotion, body representation, motor control and behavior, aspects that in DSM-IV were enclosed in the perception of the environment. DSM-V broadened the definition to include psychological manifestations of dissociation: for example the somatic forms (MacPhee, 2013).

Moreover, the DSM-5 mentions that dissociative symptoms can be “experienced as

- a) unbidden intrusions into awareness and behavior, with accompanying losses of continuity in subjective experience (i.e., “positive” dissociative symptoms such as fragmentation of identity, de-personalization, and derealization) and/or

b) inability to access information or to control mental functions that normally are readily amenable to access or control (i.e., “negative” dissociative symptoms such as amnesia)” (APA, 2013)

The World Health Organization (ICD-10) defines dissociation as a “partial or complete loss of the normal integration between memories of the past, awareness of memory and immediate sensations, and control of bodily movements” (WHO, 1992).

Both DSM-V and ICD-10, highlight the psychological and somatic or sensori-motor manifestations of dissociation.

Lots of theories were explored to better understand the causes of onset of Dissociative Disorders. Nowadays, this psychopathological condition went along with the idea that such a disintegrated sense of selves, could emerge from an early life trauma (considered a disruption in ordinary daily experience) (Classen et al., 1993), linked to the attachment styles (Farina et al., 2019).

Better, the model of dissociative psychopathology emerging from the attachment theory, is fulfilled by the explanation that the insurgence of dissociation is correlated with a story of trauma (Liotti, 2006).

Liotti proposed an attachment-based model of the dissociative disorders and of other trauma-related disorders that involve dissociation, clarifying such an insidious mind-development. Bowlby (1973) first hinted at the relationship between attachment processes and dissociative psychopathology. When he examined this process, he sensed that the primary caregivers could cause the infant to develop multiple internal representations of self and attachment figures instead of unitary or cohesive and secure attachments. These different internal representations were called by Bowlby “Internal Working Models” (IWM): once the attachment system is activated, the disorganized IWM leads to multiple, contradictory, reciprocally disaggregated

expectations. If a child has multiple IWM, one will become dominant in regulating perceptions and emotions. When the child faces with a stressful context, other IWMs could emerge regulating subject's actions: a way to act that will result totally different to the person's usual sense of self. The disorganized attachment (DA) was firstly noticed in the Strange Situation Procedure (SSP, Ainsworth et al., 1978), and included in the other subtypes of attachment style: secure, insecure-avoidant, insecure-resistant. DA was characterized by simultaneous approach and avoidance of the caregiver, resulting in a lack of organization and orientation in the infant's attachment behavior. DA was statistically linked to unresolved early traumas and the loss of the caregivers during early lifetime (Main & Solomon, 1990). The explanation of the construction of this specific style of attachment, rising before an eventual early trauma or a loss, is that children can also be frightened if the caregiver's attitude is violent: "the caregiver becomes the source and the solution of the infant's alarm" (Liotti, 2006). Early disorganized attachment links two fundamental aspects of dissociation: an altered conscious experience and the simultaneous multiple representations of aspects of reality, normally construed as unitary, due to the caregiver's behavior (Fonagy et al., 2002). Multiple, incompatible and disaggregated representations of self and of a single caregiver, lead the child to an irreversible confusion.

This implies that a dissociative mind emerges, at the beginning of life, in conjunction with the daily experience of the relationship with the caregiver, deeply setting an insecure attachment style (Howell, 2005).

The main hypothesis explains that DDs are the result of archaic defenses against the untenable situation of mental pain caused by fright without solution.

Liotti (2006), however, highlight how turns out more plausible that DDs reflect not the outcome of defenses, but an intersubjective failure of the integrative processes that normally create a unitary sense of self during the first year of life.

Thus, the child's behavior serves as a defense against dissociation, rather than dissociation serving primarily as a defense against mental pain.

Explained the implications of the attachment style on the building of a unitary self, a dissociative mind emerges also from early trauma and traumatization. Trauma exposures during early childhood can impair child development, disrupt attachment security and self-regulatory processes (Mishra et al., 2022). Developmental traumatization has multiple shades: certain more evident, others that remains hidden or not evident for an outer eye.

Introduced the risk factors that could lead to dissociative disorders, the next step is to explain the positive (increase in function) and the negative (decrease in function) symptoms of DDs.

Dissociation encompasses a set of distinct symptoms: dissociative amnesia (getting somewhere without remembering how you arrived), depersonalization/derealization (looking in the mirror and not recognizing oneself, or perceive the environment as behind a glass) and absorption, (immersion in an external/internal stimulus like a thought resulting in disconnection from the reality) (Pozza & Dèttore, 2019; Carlson & Putnam, 1993).

Dissociative amnesia is a phenomenon that cause an evident alteration in metabolic functioning (Cuesta et al., 2021; Thomas-Anteérion et al., 2010). Is characterized by an incapacity of retrieve episodic autobiographical traumatic memories (Thomas-Antérion, 2017) and such experiences don't include only acute episodes of blackout, but also chronic symptoms such as repetitive memory gaps and micro-amnesias that



affect one's entire past story-line (Sar et al., 2014). Amnesia could cover a period of time that may extend from minutes to years (Dell, 2013).

The memory impairment in dissociative amnesia is most frequently of a retrograde nature and is often limited to the episodic-autobiographical domain (Staniloiu & Markowitsch, 2014).

The ICD-10 directly suggests that trauma or psychological stress are key players in the causes of dissociative amnesia. By contrast with ICD-10, the DSM-5 does not list the existence of these associations as an explicit diagnostic criterion, although in its descriptive section it mentions that "dissociative disorders are frequently found in the aftermath of trauma". The DSM-IV specification of criterion A for dissociative amnesia: "the inability (to recall information) may be the outcome of an underlying trauma or stress". This thin grinding highlights the openness towards a possible diversity of causal models. This complex mechanism is involved by motivational and emotional control processes: these could be blocking the executive control processes, the one involved in seeking out memories (Koechlin et al., 1999).

Dissociative amnesia has multiple shades: may be selective, and the person recalls only some events; the systematized amnesia, in contrast, is related to a loss of memory for certain categories of information, such as all memories relating to a particular person. Generalized amnesia is characterized by forgetting one's entire life or identity (Dell, 2013). In summary, Dissociative amnesias vary in their clinical manifestations, precipitants, and course. Further research is needed to understand the neurobiological, psychological, and cultural underpinnings of this variation. Nowadays, have been listed and clinically used some suggestive criteria to diagnose DA, requesting the presence of: severe impairment of autobiographical event retrieval, loss of personal identity, potential for reversibility of episodic-

autobiographical memory blockade, possible changes in brain metabolism or subtle changes in fibre structure, cognitive impairment greater than expected from injury or that does not match the locus of injury or both, psychiatric history of depressive episodes, previous episodes of dissociative amnesia or fugue, history of a stressful childhood or youth or a major psychotraumatic event in the past plus a proximal distressing event, and other associated conversion symptoms (Staniloiu & Markowitsch, 2014).

Depersonalization and derealization is a condition characterized by persistent feelings of detachment from one's self and of unreality in perceiving the outside world (Yang et al., 2023), like the subject is looking through a fog. Is usually associated with physical and emotional numbing, temporal distortion of time and rarely with visual and auditory distortions (Choi et al., 2017), meanwhile the reality testing remains intact. This way, the subject tends to develop a sense of hypo-emotionality and disconnectedness from daily life. This condition is conceptualized as a way out from the experience of a hostile reality, but this self-protective measure is evident how could become maladaptive. Depersonalization and derealization can occur in concert with other symptoms (as in Dissociative Disorders with dissociative amnesia), isolated (just depersonalization alone, or just derealization) or could emerge as a specific disorder itself, called Depersonalization and Derealization Disorder (DDD) (Büetiger et al., 2020). The one most deepened here, will be the case of depersonalization and derealization as symptoms of dissociative disorders.

Absorption is commonly considered as a non-pathological form of dissociation: it refers to the tendency to become immersed in a single stimulus, either external or internal, while neglecting other stimuli in the environment (Soffer-Dudek et al., 2015). The absence of a clinical-level for absorption has led to the claim that absorption is

not necessarily psychopathological, but rather, it is a personality trait that describes changes in attention that manifest as normal, such as daydreams and automatisms. Anyway, many despite evidence associating absorption with psychopathology, firstly considering that absorption, is the counterpart of detachment from external reality (Vogel et al., 2013).

Anyway the exploration carried out in this setting, is focused on the three dimensional model of dissociation. For that reason, the Dissociative Experiences Scale (DES-II) is used. DES-II analyzes the main three symptoms of Dissociative Disorders: Dissociative Amnesia, Depersonalization/Derealization and Absorption.

## 1.2 Child Maltreatment

Child maltreatment is defined as any act or series of acts, of commission or omission (the case of neglect) by a parent or other caregiver that results in harm, potential for harm, or threat of harm to a child (Leeb, 2008). Types of child maltreatment are split under main typology: abuse, neglect.

Child maltreatment is associated with serious health consequences and there is a growing consensus in the field that experiences of child maltreatment contribute to the onset of dissociative disorders (Tolliver et al., 2023; Kaufman & Torbey, 2019).

Child maltreatment has a well-documented and replicated strength of the associations with the development of multiple forms of psychopathology in adulthood. Trauma results “from an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being” (Chaiyachati & Gur, 2021).

Maltreated individuals with depressive, anxiety, and substance use disorders have an earlier age at onset, greater symptom severity, more comorbidity, a greater risk for suicide, and poorer treatment response than non-maltreated individuals with the same diagnoses.

Neglect occurs when a child hasn't appropriate care: not provided enough to eat or drink, hygiene not attended to, lacked shelter, not provided routine or urgent medical care, left alone when too young to care for himself/herself, or left with inappropriate caregiver (e.g, sex offender, intoxicated individual). Neglect constitutes one of the major form of developmental trauma: seems to be less impactful than other types of abuse, nevertheless is one of the most insidious (Farina et al., 2019).

Data from the World Health Organization world mental health survey document a global population report rate by adults of 4.4% for neglect, but in the existing literature, prevalence rates of child neglect ranged from 1.4 % to 80.1 %. Yet, precise estimates of global burden of maltreatment may be limited given cultural influences on specific definitions of maltreatment and wide variance in reporting mandates across international jurisdictions (Kessler et al., 2010).

In Italy the sample survey promoted by the Ombudsman for children with Istat, estimated a total of 457.453 children and adolescents in care to the local social services, of these, 91.272 were taken in charge for a form of child abuse, in particular 47,1 % for neglect (Associazione Artemisia, 2017).

There are three subtypes of neglect: physical neglect refers to the failure to meet children's physical needs, emotional neglect refers to the failure to meet children's emotional needs and educational neglect refers to the failure to provide the care and supervision that are necessary to secure a child's education.

A recent meta-analytic review estimates the global prevalence of physical neglect (16.3%) and of emotional neglect (18,4%) (Stoltenborgh et al., 2013).

To explain this phenomenon various theoretical models were structured. Blumenthal (2015) summarizes all the theoretical models in three different causal neglect models: a model of parental deficit (parents or guardians are primarily responsible for ensuring child welfare and that the cause of child neglect is inadequate parenting: parental characteristics such as psychopathology, cognitive distortions or experience inappropriate care, are the major causal factors for child neglect), an environmental deficit model (the material deprivation is the primary cause of child neglect: in this model, poverty induces stress that makes parents unable to materially and emotionally satisfy the needs of the child) and an ecological-trans-actional model (the

cause of neglect is in the interaction of family characteristics and environmental factors) (Blumenthal, 2015). Anyway the presence of some risk factors does not mean that abuse or neglect of children must occur.

Normal child development and brain growth can be interrupted by deprivation related to neglect and result in dysregulation of the neural system and lead neurocognitive deficits.

On the side of physical health, neglect could trigger an escalation of consequences: child abuse and neglect can include immediate and direct injuries, that could additionally be compromised by insufficient access to medical care. Moreover, by meta-analysis, has been suggested a causal relationship between experiences of childhood maltreatment and high-risk behavior changes that may impact physical health (for example high-risk sexual behavior) (Norman et al., 2012), added to the fact that neglect has been shown to be associated with a broad range of long-term poor physical health associations.

There is also wide literature, affirming that neglect may increase risk of depression and anxiety during childhood and also in adulthood (Gardner et al., 2019).

Moreover, experiences of trauma, including neglect, have been shown to be predictive of the broader category of psychotic experiences, such as schizophrenia: has also been found an associations between trauma exposures and psychotic experiences (Varese et al., 2012). Neglect, is associated with increased risk during adulthood of a wide range of psychological and behavioral problems, including depression, alcohol abuse, anxiety, suicidal behavior and also associated with an almost 3-fold increased risk of developing eating disorders. Looking through a neurofunctional lens, has been demonstrated that child abuse and neglect is a

moderating factor in the pattern of cortisol reactivity in those with schizophrenia (Quidé et al., 2021).

Physical, emotional, and sexual abuse constitutes typical subtypes of abuse that a child could face in the scenario of childhood maltreatment. These types of developmental traumatization, sometimes are perceivable from people outside the family, sometimes not.

Physical abuse occurs when a parent or other adult in the household physically assaulted the child (e.g., hit, push, choke, shake, throw, bite, burn) causing bruises or physical injury. This may have occurred in the context of disciplining the child, or independent of discipline.

Adults who report a story of childhood physical abuse, outcome as significantly higher-risk life-long rates on depression, post-traumatic stress disorder (PTSD), substance abuse (MacMillan et al., 2001) and dissociative disorders (Holowka et al., 2003). Particularly, men who experienced physical abuse in childhood had significant scores in life-long anxiety disorders, alcohol and drug abuse and antisocial behavior. Women who experienced in childhood the same type of abuse, had significant higher scores for life-long anxiety disorders, major depression, alcohol and drug abuse and antisocial behavior. A history of physical abuse increases the likelihood of lifetime psychopathology; this association appears stronger for women than men. Referring to the previous Italian sample, the percentage of children and adolescents taken in charge for child abuse, specifically for physical abuse, is 6.9%.

Emotional and psychological abuse involve a pattern of failure over time on the part of a parent or caregiver to provide a developmentally appropriate and supportive environment. A parent or other adult in the household told child that s/he is not good, yelled at child in a scary way, or threatened to harm, abandon, leave or send child

away. Acts in this category may have a high probability of damaging the child's physical or mental health and development.

The exposure for a child to emotional abuse could lead in adulthood to dissociative disorders, depressive disorders, anxiety disorders, eating disorders, drug use and suicidal behavior. Emotional abuse was independently associated with depressive symptoms mediated by emotion dysregulation, and interpersonal problems (Christ et al., 2019).

Sexual abuse is defined as the involvement of a child in sexual activities that he or she does not fully comprehend, is unable to give informed consent to or for which the child is not developmentally prepared, or else that violates the laws or social taboos of society. Children can be sexually abused by both adults and other children who are in a position of responsibility, trust, or power over the victim.

Is a hard word to give the exact limits and definition of sexual abuse, having regard to many types of sexually abusive acts toward children, including sexual assault, rape, incest, and the commercial sexual exploitation of children (Murray et al., 1993). The US Centers for Disease Control and Prevention provides specific definitions to clarify each type of sexual abuse distinguishing: sexual acts as those involving penetration, abusive sexual contact as intentional touching with no penetration, and non-contact sexual abuse such as exposing a child to sexual activity, taking sexual photographs or videos of a child, sexual harassment, prostitution, or trafficking.

The prevalence of child sexual abuse is 12-13% worldwide (18% by girls, 8% by boys) (Enyedy & Csorba, 2017). The prevalence of sexual abuse in Italy, referring to the ISTAT data, is that 4,2% of abused child has been sexually abused (Associazione Artemisia, 2017). Childhood sexual abuse usually occurs with other forms of abuse and neglect. Sometimes is difficult to acquaintance the sexual abuse occurred in a



family, because children are often manipulated to feel guilty or responsible for the abuse: a motivation that explains why abused children don't ask for help.

The main symptoms that appeared after sexual abuse, in many studies included sexualized behavior, anxiety, depression, withdrawn behavior, somatic complaints, aggression, and school problems (Kendall-Tackett et al., 1993). Post Traumatic Stress Disorder is one of the most related psychopathology to sexual abuse.

In the last decades, another form of childhood adverse experience took hold in the field of early traumatic experiences and is a purported early emerging trans-diagnostic risk factor contributing to psychopathology in adulthood: overcontrol (Wu et al., 2022).

Overcontrol is defined as negative parenting behavior, where caregivers are excessively involved in children's activities. Parental overcontrol is a type of child maltreatment proposed to be traumatizing to the child development, such as neglect and abuse, derived from a negative parenting behavior, where caregivers are excessively involved in children's activities (Sar et al., 2021). These parents attempt to limit children's independence by not allowing them the opportunity to explore the world individually. Parents' failure to grant autonomy to their children is associated with a decrease in children's self-efficacy and an increase in perceived vulnerability to threat (Wood et al., 2003).

Parental overcontrol is related to higher rates of mental health problems in adulthood, self-harm, and suicidal behavior and is consistently linked an over-controlling parenting style to child anxiety (Francis et al., 2019; Bertule et al., 2021; McLafferty et al., 2019). Children of parents who use these practices have fewer opportunities to explore new environments and to learn to cope and problem solve in anxiety-provoking situations, set against non-anxious parents that may be more able to

discriminate valid requests for help. This notion is consistent with the idea that parental cognition predicts and reciprocally interacts with parental behavior.

In new reserches, overcontrol was positively associated with all the other trauma subtypes (abuses and neglects) in the Childhood Trauma Questionnaire (Bernstein et al., 2003). Post-hoc analyses suggested that overcontrol experiences during childhood were associated with depression in females and associated with anxiety in males in adulthood(Zhang et al., 2023).

Few instruments are nowadays focused on the investigation of parental overcontrol because of its youth of discovery, such as the Measure of Parenting Style (Parker et al., 1997). This construct must be deepened, in its shades, repercussions in adulthood and eventual links with other psychopathologies.

Beyond the risk factors listed before for every subtypes of traumatic experiences, patients with dissociative disorders report the highest frequency of childhood trauma among all psychiatric categories (Sar, 2014).

### **1.3 Aim of this study**

As previously mentioned the construct of parental overcontrol is implicated across internalizing presentations and the development of psychopathology in adulthood for children that experienced this type of child maltreatment.

Overcontrol can be identified using the Measure of Parental Style (Parker et al., 1997).

In previous researches has been demonstrated that both childhood physical abuse and childhood emotional abuse are noted risk factors for depersonalization/derealization disorder.

Neglect has been identified as a risk factor for depersonalization/derealization disorder and for dissociative amnesia (Simeon et al., 2001; Brunner et al., 2000).

In a study of Webermann & Murphy (2019) childhood sexual abuse was uniquely predictive of dissociative amnesia, the authors link this association with the possibility that not only is the sexual abuse experience excluded from awareness, but also that the person is not aware of having difficulties with remembering.

However, previous studies did not consider Overcontrol among child maltreatment experiences because it was only recently introduced.

In this survey the association of parental overcontrol with dissociative symptoms was investigated (dissociative amnesia, depersonalization/derealization, absorption): in particular, it has been tested the association of parental overcontrol exposure severity with Dissociative Amnesia symptoms controlling for potential confounding variables such as other forms of child maltreatment and dissociative symptoms.

## **METHODS AND MATERIALS**

### **2.1 Sample Description**

The sample consists of 714 individuals belonging to the general population. 508 were female (71.15%) and 206 male, the mean age was  $30.29 \pm 11.67$  years, and the age ranges was 18–77. Participants answered an online survey shared by mailing list, social media, and instant messaging. Inclusion criteria were: Italian native language, being at least 18 years old, first time doing this survey, correct response to two attentional quality check items and giving informed consent. Participation was voluntary and totally anonymous.

## **2.2 Procedure and instruments**

Participants were asked to provide some sociodemographic information, such as age, sex, education level, occupation, tobacco use, frequency of alcohol use (quantified through the first item of the Alcohol Use Disorders Identification Test; Babor et al., 2001), use of illegal substances in the last two weeks (i.e., cannabis, cocaine, heroin or other opiates, and other unlisted illegal substances), having suffered or currently suffering from a psychiatric or neurological disorder, and use of psychiatric medication in the last two weeks.

Three questionnaires were applied: the Dissociative Experiences Scale (DES-II; Bernstein & Putnam et al., 1986), the Childhood Trauma Questionnaire-Short Form (CTQ-SF; Bernstein et al., 2003) and the Overcontrol subscale of the Measure Of Parenting Style (MOPS; Parker et al., 1997).

### *2.2.1 Dissociative Experiences Scale*

The DES is a self-report instrument structured by Eve Bernstein and Frank Putnam in 1986, developed to “offer a means of reliably measuring dissociation in normal and clinical population” (Bernstein & Putnam, 1986). This questionnaire was born to clarify the high frequency of misdiagnosis of Dissociative Disorders in those years and to investigate how dissociation contributed to the symptoms of others psychiatric disorders.

The focus of these authors was to highlight how dissociative experiences and dissociative symptoms lie along a continuum. Questions were pertinent to experiences of disturbance in identity and memory, feeling of derealization or depersonalization and associated phenomena such as absorption (Ghaffarinejad et

al., 2019) . DES consists as a 28-items scale in which subjects had to make a mark on a 100-mm line, to show how often during their life they had the experience described in the questions. From the items of this scale emerged three factors: absorption, derealization/depersonalization and dissociative amnesia (Waller et al., 1996) . The second version of the DES, the DES-II is similar to the classical DES version, but subjects are asked to rank from 0% to 100%, at 10% intervals, how often they have the dissociative experiences described in each item, from “never” to “at least once a week” (Abasian et al., 2016). Another version of DES frequently used is the DES-Taxon (DES-T), that was then developed in order to distinguish continuous abnormal pathological class of dissociation from normal non-pathological one. DES-T is a subset of 8 item of the DES (Leavitt, 1999).

In this study the DES-II version was used. The Italian translation showed good internal consistency, good test–retest reliability, and good convergent validity in a mixed clinical and non-clinical sample (Capraro et al., 2013; Schimmenti, 2015). The three-factor analysis structure was used: dissociative amnesia, depersonalization/ derealization and absorption. A cut-off score of 30 is considered a clinically relevant score (Carlson & Putnam, 1993).

### *2.2.2 Childhood Trauma Questionnaire - Short Form*

The Childhood Trauma Questionnaire (CTQ) is one of the most employed validated questionnaires to explore the insidious world of childhood maltreatment (Bernstein & Fink, 1998). CTQ is 70-item self-report instrument, developed to provide brief, reliable and valid assessment of a broad range of traumatic experiences in childhood, such as abuse and neglect (Bernstein et al., 1994). Items measure physical and emotional abuse, sexual abuse, physical neglect and emotional neglect.

Responses are rated on a 5-point Likert-type scale, according to the frequency with which experiences occurred. Response options range from “never true” to “very often true.” Cut scores can be applied to identify individuals with histories of abuse and neglect.

A shorter version of the 70-item CTQ (CTQ-SF) was introduced by Bernstein et al. in 2003, to provide more rapid screening for maltreatment histories in both clinical and non-referred populations. This questionnaire is equally useful in both normal and clinical populations, such as the previous CTQ, only reducing the number of items on each factor. The aim was to reduce the full form from 70 to 25 items plus the 3 validity items (measuring minimization and denial as an index of possible underestimation of maltreatment), producing a 28-item short form of the questionnaire. CTQ-SF also wanted to establish reliable subscales that were equally balanced among the five types of maltreatment and had sufficient items to provide a breadth of content.

In this study is used the Italian version of the CTQ-SF (Sacchi et al., 2018).

### *2.2.3 Overcontrol subscale of the MOPS*

The MOPS (Parker et al., 1997) was developed to focus on dysfunctional parenting styles. MOPS can be considered as a modified version of the Parental Bonding Instrument (PBI) introduced by Parker (Parker et al., 1979).

The MOPS comprises two refined PBI scales assessing parental indifference and overcontrol, and adds a third scale assessing parental abuse. MOPS is composed of 30 items, scored on a 4-point Likert scale that indicates the degree of the subject's agreement with the item statement. The items refer to three dimension: indifference, overcotrol and abuse, that subjects recall having received from either mother

(maternal form) or father (paternal form). Therefore, the subject has 15 items which refer to maternal form, and 15 items which refer to paternal form. Factors are thereby split in 6: maternal indifference, maternal overcontrol, maternal abuse and paternal indifference, paternal overcontrol, paternal abuse.

The responsive subjects have to refer answers to their first 16 years of life.

In this survey the Italian version is used (Picardi et al., 2013), and for the analysis was considered only the overcontrol subscale.



### **2.3 Statistical analyses**

All statistical analyses were performed using Statistical Package for the Social Sciences 25 (IBM, Armonk, NY, USA).

Dichotomous or ordinal variables are described with frequencies and percentage, meanwhile continuous variables with mean and standard deviation. In accordance with the recommendations of Kim (2013) for large samples (i.e., >300), only if the absolute skew or kurtosis values of the distribution were smaller than 2 and smaller than 7, respectively, variables were considered normally distributed.

Relationships among variables were assessed using Spearman's rho correlation coefficients because of the non-normality of the distribution.

A multiple linear regression analysis was performed to assess the independent predictive role of parental overcontrol on Dissociative Amnesia. Overcontrol subscale of the MOPS was considered as the independent variable and dissociative amnesia subscale as the dependent one. CTQ subscale scores (i.e., physical abuse, emotional abuse, sexual abuse, physical neglect, emotional neglect), DES subscale scores (i.e. depersonalization and derealization, absorption), clinical records (self-reported present or past psychiatric disorders, tobacco, alcohol, illegal substances and/or psychiatric medication use) and socio-demographic data (i.e., age, sex, education level, and student or worker status) were also included in the model. All the variables were entered simultaneously in the model.

**Table 1. Descriptives.**

Socio-demographic and clinical data of the sample (N = 714)

Variables	
Age - M $\pm$ SD	30.29 $\pm$ 11.67
Women - N (%)	508 (71.15)
Education	
Elementary or middle school diploma - N (%)	14 (1.96)
High school diploma - N (%)	293 (41.04)
Bachelor's degree - N (%)	407 (57.00)
Occupation	
Student - N (%)	307 (43.00)
Worker - N (%)	365 (51.12)
Tobacco use - N (%)	295 (39.92)
Alcohol use	
0= Never - N (%)	73 (10.22)
1= Monthly or less -N (%)	128 (17.93)
2= 2-4 times a month - N(%)	305 (42.72)
3= 2-3 times a week - N(%)	155 (21.71)
4= 4 or more times a week - N (%)	53 (7.42)
Illegal substance use <sup>a</sup> - N (%)	114 (15.97)
Self-reported psychiatric or neurological disorder - N (%)	79 (11.06)
Psychiatric medication use - N (%)	34 (4.76)
CTQ-SF - M $\pm$ SD	37.68 $\pm$ 12.07
PA - M $\pm$ SD	5.83 $\pm$ 1.93
EA - M $\pm$ SD	9.00 $\pm$ 4.40
SA - M $\pm$ SD	6.01 $\pm$ 2.88
PN - M $\pm$ SD	6.30 $\pm$ 1.85
EN - M $\pm$ SD	10.54 $\pm$ 4.45
MD - M $\pm$ SD	0.41 $\pm$ 0.84
MOPS_OVERCONTROL - M $\pm$ SD	7.66 $\pm$ 4.65
OC-M - M $\pm$ SD	4.75 $\pm$ 2.97
OC-P - M $\pm$ SD	2.97 $\pm$ 2.74
DES-II - M $\pm$ SD	15.38 $\pm$ 13.12
AM - M $\pm$ SD	8.01 $\pm$ 9.95
D/D - M $\pm$ SD	8.03 $\pm$ 14.44
ABS - M $\pm$ SD	23.55 $\pm$ 18.50
DES-II $\geq$ 30 - N (%)	87 (12.2)

<sup>a</sup> Number of individuals who reported to have used, in the previous two weeks, at least one of the following psychoactive substance: cannabis, cocaine, heroin or other opiates, and/or other not listed illegal substances.

Abbreviations: ABS = Absorption, AM = Amnesia, CTQ-SF = Childhood Trauma Questionnaire - Short Form, D/D = Depersonalization/Derealization, DA = Dissociative amnesia, DES-II = Dissociative Experiences Scale-II, EA = Emotional Abuse, EN = Emotional Neglect, MD = Minimization/Denial, MOPS\_ OVERCONTROL = Measure Of Parenting Style\_overcontrol subscale, OC-M = Maternal Overcontrol, OC-P = Paternal Overcontrol, PA = Physical Abuse, PN = Physical Neglect, SA = Sexual Abuse

## 2.4 Results

In our sample 79 subjects (11.06%) reported psychiatric or neurological disorder and 34 (4.76% of the sample) reported to use psychiatric medication.

The mean of the CTQ total score was 37.68, the mean of maternal overcontrol (4.75) was higher than the mean of the paternal overcontrol (2.97). The mean of the DES was 15.38 and, considering the cutoff, 87 subjects were over the score of 30, highlighting a possible Dissociative Disorder. The mean score for dissociative amnesia symptoms was 8.01. In our sample of 714 subjects 206 were male and 508 female. More than half of the sample had a Bachelor's degree (57%), 41.04% had a high school diploma and only 1.96% had elementary or middle school diploma. Sample was made up of 307 students and 365 workers. 285 subjects of this study used Tobacco and 114 subjects reported to have used, in the two weeks before the administration of the survey, illegal substances. 10.22% of the sample never drinks alcohol, 17.93% once in a month, the majority, 42.72% drinks alcohol 2-4 times in a month, 21.71% 2-3 times in a week and only 7.42% 4 or more times in a week.

All the variables had correlation and in Table 2 are listed the results of the regression. Maternal overcontrol was independently associated with severity of dissociative amnesia symptoms. Also age and emotional neglect were associated, as well as Depersonalization and Derealization and Absorption.

**Table 2.**

Linear regression analysis in all sample (N = 714)  
 Dependent variable: Amnesia

Independent Variables	$\beta$	p	[95 % CI]
<b>Age</b>	<b>0,009</b>	<b>**0,002</b>	<b>[0,030; 0,138]</b>
Sex	-0,031	0,232	[-1,802; 0,438]
Education	-0,051	0,055	[-1,928; 0,021]
Student	0,036	0,547	[-1,635; 3,085]
Worker	0,087	0,144	[-0,414; 3,870]
Illegal substances use	0,020	0,466	[-1,590; 3,469]
Psychiatric/Neurological	-0,044	0,126	[-3,184; 0,393]
Tobacco use	0,014	0,598	[-0,778; 1,349]
Alcohol use	-0,002	0,931	[-0,518; 0,474]
Psychiatric medication use	0,003	0,922	[-1,361; 1,504]
EA	-0,071	0,100	[-0,354; 0,031]
PA	0,034	0,289	[-0,147; 0,494]
SA	0,048	0,108	[-0,037; 0,372]
<b>EN</b>	<b>-0,104</b>	<b>**0,008</b>	<b>[-0,404; -0,062]</b>
PN	0,044	0,186	[-0,116; 0,593]
<b>OC-M</b>	<b>0,067</b>	<b>*0,022</b>	<b>[0,032; 0,416]</b>
OC-P	0,016	0,589	[-0,148; 0,261]
D/D	0,155	0,000	[0,061; 0,156]
ABS	0,680	0,000	[0,326; 0,403]

Adjusted R<sup>2</sup> = 0.578

F<sub>19,680</sub> = 51,295

Abbreviations: EA = Emotional Abuse, PA = Physical Abuse, SA = Sexual Abuse, EN = Emotional Neglect, PN = Physical Neglect, OC-M = Maternal Overcontrol, OC-P = Paternal Overcontrol, D/D = Depersonalization/Derealization, AB = Absorption

\*p<0.05

\*\*p<0.01

## DISCUSSION

In aim of this survey was to investigate the relationship between parental overcontrol and dissociative amnesia in a community sample of adults, clarifying the link between different forms of child maltreatment under-researched and dissociative disorders in adulthood. The investigation of this relationship has shown that maternal overcontrol was independently and significantly associated with dissociative amnesia, even after controlling other forms of child maltreatment and confounding variables. This finding suggests that maternal overcontrol may play a role in the development and maintenance of dissociative symptoms, in particular of dissociative amnesia. Results are in accordance with the previous literature affirming that child maltreatment may represent a risk factor for vulnerability to psychopathology of dissociative disorders (Simeon et al., 2001; Brunner et al., 2000; Webermann & Murphy, 2019; Francis et al., 2019; Bertule et al., 2021; Wu et al., 2022; MacMillan et al., 2001; Holowka et al., 2003).

Different factors may explain the relationship between dissociative amnesia and excessive overcontrol, but only few studies investigated this link (Wu et al., 2022; Classen et al., 1993). The gap this work would fill is to further investigate the repercussion of overcontrol in child's adulthood. However, more studies, also longitudinal studies are needed to better explore and confirm the data found on this survey.

Dissociative amnesia is also associated with the other two dissociative symptoms. This result is in line with precedent literature of dissociative disorders, in fact symptoms of dissociation are mostly associated and usually have comorbidity

(Spiegel et al., 2013). From the results emerged a negative association also between dissociative amnesia and emotional neglect. Previous researches demonstrated the strong positive association between emotional neglect and dissociative disorders (Brunner et al., 2000; Wildschut et al., 2019). A research showed the indirect effect of emotional neglect on dissociation through attachment anxiety demonstrating that this relationship is mediated by attachment anxiety (Kong et al., 2018). The result that emerged from this study is probably dependent on the variables considered in the model, the unbalance of some variables (such as sex) and the fact that these data came from self-report questionnaires.

Another variable is associated with dissociative amnesia: age. It is well-known (e.g. Ryan et al., 2016) that aging has been associated with a decline in memory, which is critically supported by the hippocampus. Aging has also been associated with an emerging decline in hippocampal function (Ryan et al., 2016) affecting the mnemonic capacity. That may be the reason why age is positively associated with dissociative amnesia, as emerged in other studies affirming that the aged brain has altered structure and cognitive function that leads to brain atrophy, particularly in the hippocampus and prefrontal cortex: this leads to a decline in memory (e.g. Cho, 2023).

New researches and investigations are needed to better explore the results that emerged from this study. Are also needed longitudinal researches to deepen the relationship between parental overcontrol and the onset of dissociative disorders in adulthood.

The utility of this study applies to the enlargement of overcontrol's literature, highlighting the role of parental overcontrol in the development of dissociative amnesia, such as other forms of child maltreatment. This result should be better

explored and confirmed by other surveys, and eventually not be underrated by clinical practice.

The limits of this study is that is based on self-report questionnaires and some variables aren't balanced, for example the number of women were disproportionate compared to male participants.



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