Universitat de Girona

MEDICINE SCHOOL

END OF TERM PROJECT

Role of emotion regulation in the development of substance use disorders among adolescents with history of childhood maltreatment: A longitudinal 5-year follow-up study

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1. ABSTRACT

BACKGROUND: Worldwide, according to the WHO, 1 in 4 adults suffered from physical abuse as children and a 12% of children were sexually abused in the past year. Childhood maltreatment is a considered one of the most potent predictors of future psychopathology. Recent research proved that one of the mechanisms underlying this association are the alterations maltreatment causes to a number of neurocognitive systems, such as emotion regulation. Deficits in emotion regulation affect to the normal interactions children have with their environment, impacting in their social relationships and making them more vulnerable to suffer from peer rejection. And thus, having enhanced probabilities for get involved in high-risk situations such as substance use and ultimately substance use disorder when they reach adolescence.

OBJECTIVES: The main objective is to assess the role of altered emotion regulation in the development of substance use disorders among adolescents with history of childhood maltreatment. Secondary objectives are to evaluate the maintenance over time of emotion dysregulation, and to establish if major levels of childhood maltreatment severity are consistent with greater emotion dysregulation and therefore, greater engagement to substance use disorders.

METHODS: A cohort study will be performed between September 2019 and December 2026. A total sample of 132 participants aged 10-12, who accomplish the inclusion and exclusion criteria, will be recruited from the "Centres de Salut Mental Infantil i Juvenil" (CSMIJ) included in the Girona's Mental Health Network. The follow-up period will be of 5 years.

KEY WORDS: *childhood maltreatment, emotion regulation, difficulties in emotion regulation, substance use disorder, adolescent*

2. ABBREVIATIONS

MRI: Magnetic Resonance Imaging

IQ: Intelligence Quotient

fMRI: Functional Magnetic Resonance Imaging

ACC: Anterior Cingulate Cortex

PFC: Prefrontal Cortex

HPA: Hypothalamic-pituitary Adrenal Axis

ACTH: Adrenocortico-trophic Hormone

SUD: Substance Use Disorder

COAs: Children of Alcoholic Parents

SES: Socioeconomic Status

WHO: World Health Organization

DSM-5: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition

CTQ-SF: Childhood Trauma Questionnaire- Short Fort

DERS: Difficulties in Emotion Regulation Scale

T-ASI: Teen-Addiction Severity Index

FAS: Family Affluence Scale

BIS-11-A: Barrat Impulsiveness Scale for Adolescents

WASI: Wechsler Abbreviated Scale of Intelligence

CSMIJ: "Centre de Salut Mental Infantil I Juvenil"

URPIJ: "Unitat de Referència en Psiquiatria Infantil i Juvenil"

UHA: "Unitat d'Hospitalització d'Aguts"

EIPP: "Equips d'Intervenció Precoç a la Psicosi"

CSMA: "Centres de Salut Mental d'Adults"

CEIC: "Comitè d'Ètica d'Investigació Clínica"

3. INTRODUCTION

The human brain begins its development approximately 2 weeks after conception and reaches adult maturity in the third decade of life (1). Although genes provide a general "blueprint" for brain development, which each individual holding a unique genetic plan, the environment determines the extent to which this blueprint is carried out (34). Postnatal phases of brain development rely heavily on experience. Experiences are particularly decisive if occurring during early sensitive or critical periods when brain systems are rapidly organizing, and thus, at a time when genotype is interacting with the environment to create an adaptative phenotype.

Brain goes through processes of synaptic overproduction which occur largely under genetic control; and are followed by a pruning of the uncommitted synapses, which is primarily influenced by experience, allowing brain networks to develop, fine-tune, and optimize its adaptation to the surrounding environment (1). Hence, maturity comes about via genetic and environmental factors and their complex interactions over time. The absence of expected input during sensitive periods of brain development, therefore, threatens the brain's ability to reach its genetic potential (1).

Stressors experienced early in life can alter key neural networks in, and functioning of, the developing brain (2).

3.1. CHILDHOOD MALTREATMENT

3.1.1.Definition

Child maltreatment encompasses any acts of commission or omission by a parent or other caregiver that result in harm, potential for harm, or threat of harm to a child (usually interpreted as up to 18 years of age), even if harm is not the intended result.

3.1.2. Types of maltreatment

Four forms of maltreatment are widely recognised: physical abuse; sexual abuse; emotional abuse, sometimes referred to as psychological abuse; and neglect, which can

be physical or emotional. Increasingly, witnessing intimate-partner violence is also regarded as a form of child maltreatment (3).

- **Physical abuse** is defined as the intentional use of a physical force against a child that results in, or has the potential to result in, physical injury. Physical acts can include hitting, kicking, punching, shoving, throwing, pulling, dragging, dropping, shaking, strangling/choking, smothering, burning, scalding, and poisoning (3).
- **Sexual abuse** is any sexual act with a child performed by an adult or older child including intercourse, attempted intercourse, oral-genital contact, fondling of genitals directly or through clothing, exhibitionism, exposing children to adult sexual activity or pornography, and the use of the child for prostitution or pornography (4).
- **Emotional abuse** concerns intentional caregiver behaviour that conveys to a child that he/she is worthless, flawed, unloved, unwanted, endangered, or valued only in meeting another's needs. Emotionally abusive behaviours may include blaming, belittling, degrading, intimidating, terrorizing, isolating, restraining, confining, corrupting, exploiting, spurning, or otherwise behaving in a manner that is harmful, potentially harmful, or insensitive to the child's developmental needs, or can potentially damage the child psychologically or emotionally (3).
- **Neglect** is the failure to provide for the shelter, safety, supervision and nutritional needs of the child and may be **physical**, e.g., lack of health care, abandonment, inadequate supervision; educational, e.g., allowance of chronic truancy, failure to enrol a child in school, or **emotional**, e.g., inattention to the child's needs for affection, refusal of or failure to provide needed psychological care, and permission of drug or alcohol use by the child (4), but also is the failure to supervise, e.g. inadequate supervision or exposure to violent environments (3).
- **Intimate-partner violence** is any incident of threatening behaviour, violence, or abuse (psychological, physical, sexual, financial, or emotional) between adults who are, or have been, intimate partners or family members, irrespective of sex or sexuality (5).

Consensus definitions place responsibility for safeguarding children from maltreatment on all caregivers, including teachers, trainers, or child minders). In practice, however, 80% or more of maltreatment is perpetrated by parents or parental guardians, apart from sexual abuse, which is mostly perpetrated by acquaintances or other relatives (3).

3.1.3. Epidemiology

Childhood maltreatment has been recognized as a global public health and social welfare problem. In high-income countries, about 4–16% of children suffered from physical abuse annually, and about 10% of children were neglected or emotionally abused. It was reported that approximately 702,000 children were determined to be victims of childhood maltreatment nationally each year in the United States. Among children aged 14–17 years in the USA, the estimated lifetime rate was 38.1% for childhood maltreatment, 18.1% for physical abuse, 23.9% for emotional abuse, 18.4% for neglect (6). The estimated prevalence of childhood maltreatment among children aged 8-17 years was 4,25% in Spain in 2006 (7). According to the Unified Registry of Suspected Cases of Child Maltreatment (RUMI) database, in 2017, there were 16,777 notifications of child abuse among the Spanish territory, headed by Catalonia (3,184) and Andalusia (3,135) (8).

3.1.4. Consequences

3.1.4.1. Psychic and physical consequences

The deleterious effects of childhood maltreatment and early deprivation are widely reported and acknowledged (9). Childhood maltreatment arguably represents the most potent predictor of poor mental health across life span and the most important preventable cause of psychopathology accounting for about 45% of the population attributable risk for childhood onset psychiatric disorders (9).

Evidence suggest that such early adversity increases the risk for externalizing and internalizing psychopathology, which are two major dimensions, the latent structure of common mental disorders. That is, childhood abuse has an impact on

common psychiatric disorders, by increasing vulnerability to express externalizing and internalizing psychopathology (10).

The externalizing dimension indicates liability to experience substance disorders, conduct disorder, and antisocial personality disorder. During childhood and adolescence, the range of externalizing problems include attention deficit/hyperactivity disorder, conduct disorder, oppositional defiant disorder, delinquency and antisocial behaviour. Externalizing problems extends into adulthood, when victims have significantly elevated rates of antisocial personality disorder, self-reported crime and criminal arrests.

The internalizing dimension indicates liability to experience mood and anxiety disorders such as major depression, dysthymia, generalised anxiety disorder, post-traumatic stress disorder, panic disorder and social phobia. As children, victims of maltreatment are at risk of major depressive disorder, anxiety disorders, post-traumatic stress disorder and symptoms of trauma. Risk for internalizing disorders extends into adulthood. In a meta-analysis of eight cohort studies from the United States, New Zealand, and Australia, all but one of which relied on official records to prospectively ascertain maltreatment, a documented history of childhood maltreatment was associated with an increased odds in adulthood of major depressive disorder [odds ratio (OR) = 2.03, 95% confidence interval = 1.37 to 3.01] and any anxiety disorder (OR = 2.70, 95% confidence interval = 2.10 to 3.47). The authors estimated that 59% of depression and anxiety cases worldwide are attributable to childhood maltreatment and that a 10% reduction in child maltreatment could potentially prevent 31.36 million cases of depression and anxiety.

Furthermore, victims of child maltreatment are at risk for borderline personality disorder, and they have major risk for suicide during adolescence and adulthood. Moreover, results from a meta-analysis of 41 prospective cohort, population cross-sectional, and case-control studies indicated that individuals who experienced childhood trauma were at elevated risk for psychotic disorder, schizoaffective disorder, or schizophrenia or for psychotic symptoms, with an OR of 2.78.

In addition, it is widely understood that individuals who meet criteria for a given disorder and have a history of childhood maltreatment differ in a number of respects from those without such a history. Psychiatric disorders in victims of maltreatment are likely to develop earlier, with more severe symptomatology and with an increased risk of comorbidity. Moreover, a disorder in an individual who has experienced childhood maltreatment has more probabilities to be persistent and recurrent and less likely to respond to standard treatment approaches. Studies have shown that both psychological and pharmacological interventions for depression (for example) are less effective for individuals with prior experiences of childhood maltreatment (11).

Childhood maltreatment has long-lasting consequences not only in mental, but also physical health, predicting enduring abnormalities in stress-sensitive biological systems (nervous, immune, endocrine/metabolic systems) and are related to several chronic somatic conditions involving inflammatory processes, particularly cardiovascular and autoimmune diseases. These individuals have higher adult rates of inflammation, metabolic syndrome, arthritis, ischaemic heart disease, cancer and shortened telomeres associated with reduced life expectancy (9).

Child abuse and early life stress has furthermore been associated with a series of cognitive problems such as specific deficits in language, memory, learning and attention, which lead to low academic performance and IQ (4). Atypical emotional development is also often observed in children reared in adverse contexts. Problems involve difficulties with stress, sensitivity to reward, and emotion and behavioural regulation (1).

3.1.4.2. Neurobiological consequences

Trauma or stress during early life periods has the capability to disrupt neurodevelopmental processes, increasing though the risk for ongoing psychopathology (4). A number of structural and functional neurobiological consequences of early stressful experience have been identified and include reduced corpus callosum size, attenuated development of the left neocortex, hippocampus, and amygdala, enhanced electrical irritability in limbic structures, and reduced functional activity of the cerebellar vermis (12).

3.1.4.2.1. Structural alterations

Maltreatment has been shown to correlate with structural brain differences. Several studies have shown reduced brain volumes, with alterations observed in temporal, frontal, parietal, and occipital regions, and in overall cortical grey and white matter volume (1). Results from a longitudinal study which examined the associations between child abuse and neural structure and whether abuse-related differences prospectively predicted psychiatric symptoms showed that abuse was associated with reduced cortical thickness and lateral prefrontal and temporal lobe regions. Thickness of the left and right parahippocampal gyrus predicted antisocial behaviour symptoms and thickness of the middle temporal gyrus predicted symptoms of generalized anxiety disorder (13).

3.1.4.2.2. Functional alterations, neurocognitive changes and theory of latent vulnerability

In contrast to the number of studies examining structural brain differences, only a few have investigated possible functional correlates associated with maltreatment (4). Functional studies have the potential to shed greater light on psychological mechanisms permitting to investigate with some degree of precision how individuals who have experienced maltreatment process the world differently from their peers (14). This is closely related with the understanding of how maltreatment alters neurocognitive systems in ways that can embed vulnerability to future mental health problems. Most of the available literature focus on four neurocognitive systems: threat processing, reward processing, emotion regulation and executive control.

There is a growing current in which these neurocognitive changes are not conceptualized as signs of "damage" but rather as indicators of "latent vulnerability", and therefore these indicators can provide important clues regarding the pathogenesis of psychopathology at a mechanistic level, and in turn offer potential targets for future preventative interventions (11).

The theory of latent vulnerability reconceptualizes the link between childhood maltreatment and the associated increased risk of psychiatric disorder across life span. Latent refers to a quality or state existing but not yet developed or manifested. This

theory suggested that there are measurable alterations in a number of neurobiological systems that follow from experiences of maltreatment that are latent in so far as they do not necessarily have an immediate clinical manifestation, but nonetheless are associated with an increased risk of, or vulnerability to, future psychiatric disorder. A general principle of the theory is that these changes are often beneficial within the early maladaptive context (i.e. carry adaptive value within that particular setting) thus representing in part a functional response. However, such adaptations are equally thought to incur a longer term cost as they may mean that the individual is poorly optimized to negotiate the demands of other, more normative environments, thus increasing vulnerability to future stressors (11). Patterns of adaptation are likely to arise at multiple levels, for example, childhood experiences of maltreatment are also linked to altered patterns of epigenetic modulation in genes implicated in a range of physical and psychiatric disorders (14).

Nevertheless, we focus on neurocognitive functioning as the level of investigation most likely to have immediate translational relevance. In this context, indicators of latent vulnerability can be thought of as being characterized by these key features (14):

1. First, markers of latent vulnerability are not necessarily symptoms of any future disorder. Rather, they refer to cognitive processes or representations and associated patterns of neural activation that are implicated in the pathogenesis of a disorder. For example, altered response to reward cues at the neurocognitive level may increase vulnerability to depression, but this pattern of altered reward processing does not in itself constitute a symptom of depression.
2. Second, latent vulnerability in maltreated individuals is best indexed by a systems-level approach. In other words, reflects a complex phenotype that can be thought of as a "maladaptive calibration" in one or more systems important for socioemotional and cognitive functioning. Maltreatment impacts on genetic, cellular, hormonal factors contributing to the developmental emergence of a complex, system-level latent vulnerability phenotype.
3. Third, these indicators should be present prior to onset of psychiatric disorder and help predict level of future risk. That latent vulnerability is present does not

necessarily inform us as to the timing of disease onset. Such vulnerability could theoretically be present for months or years, but clinical symptoms may only manifest under certain conditions characterized by stress or developmental challenge, or indeed may never manifest given adequate intrinsic and extrinsic protective factors (e.g. resilient genotypes, social support), and the absence of future stressors, despite the enduring presence of latent vulnerability. In other words, the emergence of a psychiatric disorder can be understood as the interaction between latent vulnerability and stressor exposure (14).

Therefore, the concept of latent vulnerability is different from the concept of "prodrome", which is an early sign or symptom (or set of signs and symptoms), that often indicate the onset of a disease before more diagnostically specific signs and symptoms (11)(15).

These neurocognitive changes can confer latent vulnerability to future stressors either directly or indirectly. Direct effects can be understood as the way in which maltreatment-related neurocognitive changes alter how an individual perceives, processes, and responds to the internal and external world around them (16). For example, increased allocation of attention to threat cues may reduce the attentional capacity available to be invested in more normative aspects of social and cognitive development, reducing the degree to which an individual is able to process other potentially helpful cues in their environment (14). By contrast, indirect effects refer to how maltreatment-related neurocognitive changes influence the way that an individual cumulatively shapes their own social ecology over time (16). For example, altered patterns of threat vigilance and avoidance may increase the risk of conflictual social interactions making it more difficult for the child to build stable friendships that can help buffer the impact of future stressors (14). Similarly, attenuated reward processing may increase anhedonia, reducing the motivation to engage in novel activities or social interactions that may in turn curtail the development of supportive peer friendships. These latent vulnerability effects, both direct and indirect, will over time reduce the degree of resilience shown by an individual in the face of a future stressor, thereby increasing the probability that a mental health problem will emerge (14).

In other words, interactions between an individual's genotype and the environment, cause variations on these neurocognitive systems (i.e, phenotypes), for example, having increased reactivity to threat cues, in turn, reduces the attentional capacity to more normative inputs. This last fact, will modify the way the individual interacts with the environment, leading to conflictual social interactions, deviant peers and high-risk situations.

As previously mentioned, the following are the most studied neurocognitive systems in which maltreatment has serious consequences with. Particularly, emotion regulation will be exposed with higher level of detail as it is part of the aim of the current study.

1. *Threat processing*

The ability to detect and respond to aversive and potentially dangerous stimuli is a necessary condition for survival. Evidence suggest that the amygdala plays a critical role in the detection of salient stimuli, in particular stimuli associated with danger. The amygdala is connected with subcortical temporal regions involved in fear conditioning, such as the hippocampus, and with cortical areas involved in regulatory responses and salience detection, including the anterior insula, the dorsal anterior cingulate cortex and ventromedial prefrontal regions. Early adversity alters the neural reactivity of the threat system. Series of fMRI studies found patterns of hyper- and hyporreactivity of the amygdala and anterior insula in maltreated samples during threat processing in a paradigm using emotional faces. The degree of reactivity appears to partly relate to the severity of early adversity and possibly to genetic differences. This pattern of findings is consistent with the view that altered threat reactivity, which in short term reflects an adaptation to environmental threat, may be in long term a factor of latent vulnerability, contributing to an increased risk of psychopathology. Altered amygdala and anterior insula activation have been implicated in several disorders, including posttraumatic stress disorder, anxiety and mood disorders, conduct problems and drug addiction (14).

2. *Reward processing*

Reward processing plays a central role in our ability to successfully adapt to the environment by motivating and reinforcing goal-directed behaviour: we seek out natural rewards and learn which neutral stimuli predicts rewards, at both conscious and unconscious levels. The key components of the reward circuit are the mesolimbic and striatal regions that are targeted by midbrain dopamine neurons. These include the ventral striatum, ventral pallidum, ACC and orbital PFC. Functional neuroimaging studies of adolescents indicate that childhood maltreatment is associated with a pattern of reduced activation to reward cues in the striatum, and in other regions implicated in outcome representation, including the orbitofrontal cortex and insula. Altered reward processing (e.g. reduced anticipation of reward) may reflect, within a growing up environment where sources of reward are unpredictable and scarce, an adaptative calibration, reducing the likelihood of experiencing disappointment. That is, an adaptation that helps the child regulate their internal state within a deprived environment. However, the blunting of anticipatory response would incur a cost, hampering exploratory behaviour in novel environments outside the home, reducing the likelihood of identifying sources of reward even when these are in fact available (14).

Neurological alterations in reward processing, such as reduced activity in the striatum, have been implicated in the pathophysiology of several disorders, including depression, substance abuse and anxiety (14).

3. *Executive control*

Planning, flexible thinking and anticipating outcomes are crucial to accomplish typical day-to-day activities as well as to achieve long-term goals and are generally understood to reflect executive control. Executive function is comprised of a set of cognitive control processes, mainly supported by the prefrontal cortex, which regulate lower level processes (e.g., perception, motor responses) and thereby enable self-regulation and self-directed behaviour toward a goal, allowing us to break out of habits, make decisions and evaluate risks, plan for the future, prioritize and sequence our actions, and cope with novel situations (22)(14).

Impaired executive control is associated with emotion regulation difficulties, rumination and reduced social skills, which are all predictors of psychopathology. Executive control functioning predicts future symptoms of posttraumatic stress disorder, depression and anxiety, attention deficit hyperactivity disorder and psychosis (14).

Functional neuroimaging research of executive control in children and adolescents exposed to maltreatment concluded increased activity in brain regions associated with executive control (potentially reflecting decreased neural efficiency/greater effort), such as the dorsal anterior cingulate cortex, and lateral frontal regions during error processing, cognitive shifting and inhibitory responses (14).

4. *Emotion regulation*

Emotion regulation has been conceptualized as the ability to monitor, evaluate and modify one's emotional arousal such that an optimal level of engagement with the environment is fostered (17). Affect or emotion regulation is regarded as a dynamic and multifaceted process which can operate within or outside our conscious awareness (14). It comprises the following facets:

a) awareness and understanding of emotions,
b) acceptance of emotions,
c) ability to control impulsive behaviours and behave in accordance with desired goals when experiencing negative emotions, and
d) ability to use situationally appropriate emotion regulation strategies flexibly to modulate emotional responses as desired in order to meet individual goals and situational demands

Research indicates that self-regulation processes, including emotion regulation, develop in early childhood from the combined influence of the child's characteristics and the environment.

Neuroimaging studies identified a functionally and structurally interconnected circuit involved in emotion regulation. In particular, subcortical/limbic regions, involved in the evaluation of threat, reward and internal physiological states (such as

the striatum, amygdala and insula) have been found to be strongly interconnected with frontal association cortices (such as the anterior cingulate cortex and also medial and lateral prefrontal regions. These frontal brain areas are involved in integrating information from various sensory modalities and have been implicated in a number of processes involved in successful emotion regulation, including assessing one's own and others' mental states, monitoring conflicting information, inhibiting and selecting behavioural responses and also in attributing context-dependent value to stimuli. Traditionally, prefrontal regions, such as the ACC, have been understood to exert a top-down inhibitory effect over subcortical brain structures, such as the amygdala (14).

Functional neuroimaging studies linked maltreatment during childhood to emotion dysregulation by showing alterations in a group of brain regions implicated in emotion regulation, such as the ventral anterior cingulate cortex and the lateral prefrontal cortex as well as alterations in functional connectivity between frontal and subcortical brain regions, including the amygdala– ventral anterior cingulate cortex circuitry. Increased activation in frontal regulatory regions is observed, potentially reflecting greater effort, when participants are required to explicitly modulate their emotional responses to visually presented stressful stimuli. In contrast, when participants have latitude to process aversive stimuli decreased activation of the same regions is observed. Some studies indicate that maltreated adolescents tend to utilize disengagement strategies such as avoidance or escape more so than nonmaltreated youth (18). Avoidant responses may reduce the processing of aversive stimuli in the short term at the expense of the development of effective emotion regulation skills (14).

Other system identified with emotion regulation, among others, is the hypothalamic-pituitary adrenal axis (HPA). Exposure to stress triggers release of corticotrophin-releasing hormone and arginine vasopressin from the paraventricular nucleus of the hypothalamus, which in turn stimulate secretion of adrenocortico-trophic hormone (ACTH) that acts on the adrenal cortex to synthesize cortisol. Early stress may lead to an ongoing dysregulation of the HPA axis, which in turn predisposes to psychiatric disorders in later life, such posttraumatic stress disorders and major depression (19).

Early child maltreatment presents a significant threat to the optimal development of emotional understanding and regulation. Achieving "affective homeostasis" is considered one of the early stage-salient developmental tasks of an individual. Disrupted acquisition of affective homeostasis at the early stages of development produces difficulties in emotion regulation that show up as emotional deficits such as emotional intensity, attenuated empathy, contextually inappropriate affective experiences and expressions, lability, and angry reactivity (20). Normal development of emotional regulation is also disrupted for the absence of sensitive interactions between the caregiver(s) and the child. In maltreating families, parents are less likely to be available to provide support and scaffolding—from which children can learn constructive strategies to regulate their emotional states—when their children are upset. An unpredictable and disorganized environment, such as those found in maltreating homes, would make children particularly vulnerable to frequent negative emotional experiences including anger, frustration, reactivity, and irritability (21). Children and adolescents with better emotion regulation skills have the ability to respond to the ongoing demands with a range of responses that are socially acceptable and sufficiently flexible to allow for spontaneity as well as inhibition of behaviour. Children are more socially competent, have higher peer status and better quality relationships, and engage in higher levels of prosocial behaviour (22). In contrast, children with emotion dysregulation would show excessive emotional reactivity and/or emotional deficits, including constricted emotions, attenuated empathy, and contextually inappropriate affective displays and therefore are more likely to suffer social rejection (23). Differences in emotion regulation abilities may represent a risk (or resiliency) factor for the development of future psychopathology (14).

In summary, maltreated children have difficulty recognizing and understanding others' emotions, which may adversely affect their ability to respond appropriately when others express emotions. Moreover, maltreated children have difficulty understanding the sorts of situations that typically elicit positive and negative emotions, a deficit that may affect their ability to predict the reactions that their own negative behaviours elicit from others and may heighten the likelihood that they will be rejected by peers (10).

Difficulties in interpreting and regulating emotions are common features of many psychiatric disorders, including those related to childhood maltreatment (e.g. anxiety, depression, conduct disorder and substance abuse disorders) (14). Children with internalizing symptomatology, such as anxiety and depression, show emotional competence deficits including impoverished emotional awareness and dysregulated emotional expression. Such emotion regulatory problems are also observed in children with externalizing symptomatology (23). Moreover, specific strategies across emotion regulation have been consistently linked to a range of mental health outcomes. Strategies such as problem solving and seeking social support are predictive of improved functioning (i.e., fewer problems) across childhood and adolescence. In contrast, disengagement strategies, particularly avoidance, have been repeatedly and strongly associated with poor mental health outcomes and increased risk for psychopathology. This association seems to be particularly strong later in development, specifically during adolescence. Avoidance, as well as other disengagement strategies, in adolescents is associated with greater substance use, more internalizing and externalizing symptoms, and elevated aggression (18).

The reviewed findings across neurocognitive domains are beginning to shape a new understanding of a very old problem – how early experience can have such an enduring impact on mental health many years after maltreatment exposure (14).

3.2. SUBSTANCE USE DISORDER

3.2.1. Definition

Substance use disorders (SUDs) are defined, according to the DSM-5 (Annex 1), by a problematic pattern of use of an intoxicating substance in which patients continue to use the substance despite experiencing significant problems related to its use.

DSM-5 recognizes eleven classes of drug which have the potential to induce a substance use disorder. These drugs classes are alcohol, amphetamines, caffeine, cannabis, cocaine, hallucinogens, inhalants, nicotine, opioids, phencyclidine and sedatives (24).

3.2.2. Epidemiology

The majority (58%) of individuals who develop substance use disorders report their drug use began before 20, with a median age of onset between 14 and 15 years. Adolescence is the developmental period of highest risk for onset of alcohol and substance use problems. It also has been described as "the critical period of addiction vulnerability" because during this period the brain pathways that enable people to experience motivation and rewarding experiences are still developing. During this period adolescents are more prone to risk taking and less prone to impulse control.

In Europe, 18% of school aged children age 15-16 years reported lifetime use of illicit drugs. Amongst young adults age 15 to 34 years, the lifetime prevalence use of cannabis is 32%, cocaine 6%, amphetamines 5%, ecstasy 6%. The National Institute of Drug Abuse 2011 USA survey reported that the trend in daily marijuana use among adolescents has increased to its highest in 30 years with at least 25% of high school seniors using at least once per month. Daily marijuana use has surpassed daily tobacco use, the latter trend is in decline. This raises a public health concern in the light of regular marijuana usage in adolescents showing to be associated with a reduction in 6 to 8 points in adult IQ (25). Alcohol consumption in young people is also a great global concern: the World Health Organization reports that 9% of 15–29 year-olds die direct or indirectly due to alcohol use and abuse (31). The European project on the prevalence of alcohol consumption in high-school 15–16 year-old students (33) found that 80% of survey respondents had consumed alcohol; 48% of them in the 30 days before the study. Data from Spanish assessments (34) were similar to those found in the European Project.

Beginning commonly by early adolescence, experimentation with common drugs such as alcohol, tobacco or cannabis exposes the youth to social opportunities to consume illegal drugs and, as such, comprises a "gateway" to polysubstance involvement (24).

However, only a subset of the population of drug users progresses to the clinical outcome of SUD. Whereas across all age groups and both genders the lifetime prevalence of illicit drug use is approximately 30%, only about 6% qualifies for a lifetime SUD diagnosis (24).

3.2.3. Etiology

In order to understand SUD etiology is essential determine why a segment of the population develops basically the same clinical phenomenon, the DSM-5 syndrome of SUD, despite vast individual genetic differences.

Throughout life, gens interacting with manifold physical and social environments, determine each person's characteristics for multiple biological and behavioural traits. Clarifying SUD etiology is thus contingent on first identifying the heritable and environmental factors which produce phenotypes associated with heightened risk for SUD (24)(26).

3.2.4.Risk factors

3.2.4.1. Heritable risks

Historically, a person's genetic risk for developing a certain disorder has been estimated by establishing a family history of the disorder, and this approach remains important for research on SUDs. Presence of a SUD in a parent has consistently been shown to be a strong risk factor for adolescent SUDs. However, the transmission of SUDs from parent to offspring occurs through both genetic and environmental influences.

In general, children of alcoholic parents (COAs) have been studied more extensively than children of parents with other addictive disorders. The existing studies identified both common and distinct features between COAs and children of parents with other SUDs. For example, compared with children whose parents have no SUDs, COAs exhibit increased rates of alcohol use disorders. Similarly, children of parents with SUDs involving cocaine, heroin, or other illicit drugs tend to start using tobacco earlier and to have increased rates of illicit drug use and SUD symptoms (26).

3.2.4.2. Environmental risks

Several environmental influences have been identified that affect the risk of accelerated drug involvement and the development of adolescent SUDs.

3.2.4.2.1. Maltreatment and other traumatic effects

Child maltreatment has been frequently identified in the life histories of adolescents and adults in treatment for substance use disorders (SUDs), as well as in epidemiological studies of risk factors for substance use and SUD (27). It has been associated with increased risk for tobacco use, alcohol use, illicit drug use, and polydrug use (27). Maltreated children are likely to exhibit atypical physiological regulation, difficulties in affect differentiation, recognition, and regulation, dysfunctional attachment relationships, anomalies in self-system processes, perturbations in representational development, problematic peer relationships, and trouble adapting successfully to school. Those alterations compromise their adaptation to normative environments and increase the likelihood of substance abuse involvement (27).

Some studies exemplified this association. For instance, individuals who experienced maltreatment during childhood are at risk for an earlier initiation into drinking, faster increases in heavy episodic drinking during adolescence, and persistently elevated heavy episodic drinking throughout adolescence and young adulthood. Furthermore, adolescent girls with a history of childhood sexual abuse are approximately five times more likely to be heavy polysubstance users compared to adolescent girls without experiences of childhood sexual abuse (27).

3.2.4.2.2. Parenting practices

Low levels of parental monitoring are a significant predictor of adolescent SUDs. Parental involvement and monitoring predict alcohol and other drug use across all age, gender, and ethnic groups. Similarly, poor parent–child communication and poor parental support are frequently associated with greater youth substance use (28). Accordingly, a prospective study, found that among community adolescents who had never had a SUD, those who reported low levels of parental supervision were more likely to subsequently develop an alcohol use disorder.

The relationship between parenting practices and adolescent SUDs may result from the effects of parental SUDs. Parents who have problems with drugs and alcohol may model drug use, enhance opportunities for drug or alcohol use by having substances available, or fail to monitor adolescents' behaviour, thus increasing

opportunity for drug and alcohol use. Likewise, negative family interaction patterns, particularly conflict and poor communication, psychological disorders or cognitive dysfunction in the parents and low socioeconomic status have been linked to adolescent substance use problems (26)(29).

3.2.4.2.3. Peer influences

Peers are an important environmental factor in the development of adolescent SUDs, although peers seem to have a more modest role relative to parents. Longitudinal studies have demonstrated that peer alcohol and other drugs use predicts adolescent alcohol use and marijuana use. Moreover, affiliation with peers who generally engage in deviant behaviours predicted adolescent SUDs in a longitudinal study. One issue plaguing research in this area is the difficulty in determining whether peer effects result from modelling—that is, that the adolescent copies the behaviour of his or her peers, which would be more of a true environmental influence—or from selection—that is, that adolescents who already are predisposed to accelerated substance involvement because of other factors naturally seek out like-minded peers. A longitudinal study of more than 6,000 adolescents found that peer alcohol use at the beginning of the study was significantly related to increases in adolescent alcohol use over time; moreover, the reverse also was true in that adolescent alcohol use at the beginning of the study also was related to increases in peer alcohol use. This study suggests that both directions of influence likely contribute to the association of adolescent and peer substance use (26).

3.2.4.2.4. Psychopathology

Externalizing symptomatology such as disruptive behaviour problems, including conduct disorder and oppositional defiant disorders, are routinely identified as major contributors to adolescent substance use. In particular, Fergusson, Horwood, and Ritter (2007) demonstrated that conduct problems at age 7 to 9 predict cannabis and other illicit drug use and abuse at ages 18, 21, and 25.

Internalizing problems, including major depression, anxiety, posttraumatic stress disorder have been also correlated with SUDs among adolescents (30).

These heritable and environmental factors then interact to determine a person's observable characteristics and behaviours, predisposing to drug use and ultimately SUD.

3.3. LINKAGES BETWEEN CHILDHOOD MALTREATMENT, EMOTION DYSREGULATION AND SUBSTANCE USE DISORDERS

Abused and neglected children have a pathogenic relational experience with their environment. Those repeated disruptions in their functioning compromise the positive organization of diverse developmental systems, thereby increasing the probability of maladaptation, psychopathology and problematic substance use (27). Child maltreatment is a well-documented risk factor for the development of substance use and disorder (31)(32). Indeed, all and each type of abuse have been associated with increased risk for tobacco use, alcohol use, illicit drug use, and polydrug use (33).

Although the link between childhood abuse and illicit drug use in young adulthood is well established the specific mechanisms underlying the relationship between childhood abuse and substance use have yet to be fully understood (34). Since exposure to child abuse increases the risk of emotion dysregulation, and emotion dysregulation may be a vulnerability factor for the development of substance use problems (35), some recent studies have revealed emotion dysregulation as a mediator between childhood abuse and substance use consequences (36).

The associations between substance use disorders and emotional difficulties may in part be explained by the self-medication hypothesis of addictive disorders, which posits that substance use happens in response to self-regulation vulnerabilities including difficulty regulating emotions. Individuals may experience negative emotions, a lack of resources to help manage those emotions, and as a consequence turn to substances to temporarily relieve the undesirable feeling of negative emotional. Particularly among individuals who do not have adequate emotion regulation strategies to tolerate strong negative emotions, substance use may become a maladaptive coping mechanism used repeatedly when these emotions arise (35). Evidence for this internalizing, or negative

affect pathway, is emerging. Childhood emotional abuse has been found to be associated with higher levels of negative emotionality, which in turn predicted coping motivations to drink and problematic drinking (37). Interestingly, a report also found support for an internalizing pathway from child maltreatment to alcohol use, albeit moderated by gender (38). Specifically, anxiety was found to mediate the link between childhood sexual abuse and problem drinking among women; however, for men, anger was a significant pathway, suggesting potential gender differences in this mechanism of risk.

Another underlying mechanism by which maltreated children are at risk for the development of substance use and disorder is the externalizing pathway (27)(37). This pathway, also referred to as the behavioural undercontrol-disinhibition pathway, antisocial pathway, and/or deviance-proneness pathway, has developmental roots in infancy marked by a difficult temperament. Throughout childhood, behavioural disinhibition, aggression, poor self-regulation, and rule-breaking behaviours are common temperament and behavioural hallmarks of this pathway. An expression of this impaired self-control is impulsivity, defined as a temperamental trait associated with disinhibition, approach motivation, novelty seeking, and sensation seeking with diminished regard for future consequences, which in turn increases the likelihood of engagement in addictive behaviours. Investigation on brain structure confirmed that diminished activity in the orbitofrontal cortex, indicating greater impulsivity, is a vulnerability marker for developing stimulant drug abuse. In particular, the subtraits of lack of premeditation and sensation seeking have been reported to be significantly related to substance use in youth (34).

4. JUSTIFICATION

Childhood maltreatment is the most important preventable cause of psychopathology accounting for about 45% of the population attributable risk for childhood onset psychiatric disorders. A key breakthrough has been the discovery that maltreatment alters trajectories of brain development in social, emotional and cognitive domains(9). These neurocognitive changes reflect a calibration to neglectful and/or abusive early environments being beneficial and representing in part a functional response (14). Although, such adaptations are equally thought to incur a longer term cost, as they may mean that the individual is poorly optimized to negotiate the demands of other, more normative environments (16). Therefore, the impairments in neurocognitive systems index latent vulnerability and are implicated in the pathogenesis of psychiatric disorder.

Of particular interest to clinicians are malleable mechanisms that could serve as targets for interventions. One such mechanism that is malleable and linked with both psychopathology and maltreatment exposure is emotion regulation (18). Disruptions in emotion regulation are frequently posited to be a central mechanism linking child maltreatment with the onset and maintenance of psychopathology (39).

One of the most salient disorder emerging during adolescence is substance use disorder. Children who experience maltreatment are at well-documented risk for the development of problematic substance use and disorder in adolescence and beyond (27). Furthermore, a history of childhood maltreatment has an impact on the development, severity, and course of substance use disorder (40). Emotion regulation difficulties are a potentially key mechanism underlying the association between childhood maltreatment and substance use disorder (40).

Although much of the past research on the associations between childhood maltreatment and adolescent substance use problems has found that exposure to childhood maltreatment increases an individual's risk for developing substance use in adolescence, the research pointing to these associations has been mainly cross-sectional. As a consequence, an understanding of the developmental unfolding of the associations between childhood maltreatment and adolescent substance use is lacking (41).

5. HYPOTHESIS

5.1. Main hypothesis

- Maltreated children with difficulties in emotion regulation will have increased risk for develop substance use disorders.

5.2. Secondary hypothesis

- Alterations in emotion regulation will be maintained over time.
- Severity of maltreatment exposure will be associated to greater levels of emotion dysregulation and greater risk for SUDs.

6. OBJECTIVES

6.1. Main objective

- The aim of the current study is to assess the role of altered emotion regulation in the development of substance use disorders among adolescents with history of childhood maltreatment.

6.2. Secondary objectives

- Assessment of the maintenance over time of emotion dysregulation in maltreated adolescents.
- Establish if major levels of childhood maltreatment severity are consistent with greater emotion dysregulation and therefore, greater engagement to SUDs.

7. METHODS

7.1. Study design

The current protocol describes a prospective cohort study with a follow-up period of 5 years.

7.2. Study population

The participants included in this study will be children aged 10 to 12 who have been followed, during the last year or longer, by every "Centre de Salut Mental Infantil i Juvenil" (CSMIJ) included in the Girona's Mental Health Network.

7.3. Inclusion and exclusion criteria

INCLUSION CRITERIA	EXCLUSION CRITERIA
Aged between 10 and 12 years old	Children already diagnosed of substance use disorder according to DSM-5 criteria
Experiences of abuse and/or neglect prior to age 10-12, with corresponding scores based on the Childhood Trauma Questionnaire- Short Form (CTQ-SF) of ≥8 for physical abuse, ≥9 for emotional abuse, ≥6 for sexual abuse, ≥10 for emotional neglect and ≥8 for physical neglect.	Neurodevelopmental disorder (according to DSM-5, this includes intellectual disabilities, communication disorders, autism spectrum disorder, specific learning disorders and motor disorders)
Informed consent signature obtained from the child's legal guardian (Annex 8) and assent to participate obtained from the children themselves	Uncorrectable sensory handicaps
	Severe medical illnesses
	Non-Spanish or Catalan speaking

7.4. Sample selection

The sampling method used will be conveniently consecutive non-probabilistic. Participants will be recruited from the "Centre de Salut Mental Infantil i Juvenil" (CSMIJ)

included in the Girona's Mental Health Network, once the referring professional (psychiatrist or psychologist) confirms they meet the inclusion and exclusion criteria (*the maltreatment history criteria will be assessed once the participant agrees and the informed consent is signed*).

The candidate patients will be informed about the study, given the information sheet (Annex 7), and invited to participate voluntarily. To those who agree will be distributed the informed consent document (Annex 8), which will be signed by the child's legal guardian. All children must assent to participate by themselves.

After having agreed to participate, in order to select the participants of the study, the referring professional will pass to the children the CTQ-SF instrument, which will assess retrospectively the presence of childhood maltreatment.

7.5. Sample size

GRANMO application will be used to calculate the sample size of the study. We assume that the event rate in exposed is 0.34, since up to 34% of children who suffered abuse and/or neglect will present SUDs during adolescence period.

Due to our sample is comprised of children aged 10-12 who will be followed up for 5 years, and we will be measuring delicate issues such as drug use, as investigators we are aware some of the participants will change their mind or will lose interest in being part of the study, and therefore we assume an anticipated dropout rate of 30%. The minimum expected relative risk is 2, and the non-exposed/exposed ratio is 0.41.

Accepting an alpha risk of 0.05 and a beta risk of 0.20 in a two-sided test, we will need a total sample of 132 maltreated participants, of which 94 will be exposed to emotion dysregulation and 34 will be not exposed. This sample size will be required for detect as statistically significant a RR greater than or equal to 2 for SUDs in dysregulated patients with past childhood maltreatment history comparing with non-dysregulated patients.

7.6. Study variables

7.6.1. Independent variable

The independent variable are the difficulties in emotion regulation.

Emotion regulation has been defined as: the (a) awareness and understanding of emotions, (b) acceptance of emotions, (c) ability to control impulsive behaviours and behave in accordance with desired goals when experiencing negative emotions, and (d) ability to use situationally appropriate emotion regulation strategies flexibly to modulate emotional responses as desired in order to meet individual goals and situational demands.

Problems with emotion regulation can be measured by examining an individual's nonacceptance of emotional responses, difficulties engaging in goal-directed behaviours, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies, and lack of emotional clarity (20). All of these items will be evaluated using the Difficulties in Emotion Regulation Scale (DERS). Emotion dysregulation will be considered a dichotomous variable, with a positive value if the DERS score is over 80, and negative if under that score.

7.6.2. Dependent variable

The dependent variable will be the presence of a substance use disorder* (SUD), specifically, will be studied those substances most frequently used by adolescents: alcohol, cannabis, stimulants (as cocaine and methamphetamine), opioids and hallucinogens. Tobacco use will not be considered an outcome because this condition is not ordinarily related to social maladjustment.

The SUD will be assessed retrospectively after the five years follow-up by the referring and previously trained psychiatrist via a structured clinical interview following the items written in the case report form. The diagnosis will be based on the DSM-5 criteria (Annex 1).

Depending on the presence of SUD or not, this variable will be presented as:

- Yes: if the participant meets diagnostic criteria for SUD for one or more substances*.
- No: if the participant does not meet the diagnostic criteria for SUD.

It will also be reported information about the type (s) of substances used, their frequency of use and their use in the past year and in the past 30 days, and the age of onset of the SUD. The severity of the disorder will be assessed by the Teen-Addiction Severity Index (T-ASI) (Annex 6), categorizing it in not severe if scores are < 2, or severe if >2.

*It will be considered polydrug use cases reporting consumption of two or more drugs in combination, the use of one drug to counteract the effects of another or the use of different drugs at different times over a short period of time (days or weeks).

7.6.3. Covariables

- Age, measured in years

- Gender, male or female

- Intelligence quotient (IQ), assessed by the Wechsler Abbreviated Scale of Intelligence (WASI). Will be classified in low if <90, normal if >90.

- Socioeconomic status of parents or guardians: will be assessed by the Family Affluence Scale (FAS) and by responding to the following items (42) included in the Case Form Report:
    - *Current parental occupational status*: active worker, housework or unemployed, and if active, specifying where and doing what labour.
    - *Educational level*, categorized into
        - Without studies (does not know how to read or write or does it with difficulty)
        - Primary studies, finished or unfinished
        - Secondary studies, finished or unfinished
        - University studies, finished or unfinished

- *Perceived family wealth*, a subjective SES indicator, assessed by asking how rich or wealthy do you think your family is? The answer will be categorized in 1 (poor), 2 (not much poor), 3 (normal), 4 (rich) and 5 (very rich).

- Family history of substance use disorders. Factors as parental drug use or drug accessibility in the household will be evaluated during the interview by the Case Report Form (Annex 9).

- Peer substance use. Peer influence is amongst the strongest predictor of adolescent SUD. Adolescents who associate with substance using peers are more likely to use illicit substances. Peer substance use will be measured during the interview, by asking to the participants whether they believed any of their three best friends consumed any drug at least once a month (Any/None). This item will be included in the Case Report Form.

- History of complication during pregnancy (bleeding, diabetes, rhesus incompatibility, preeclampsia), abnormal fetal growth and development (low birth weight, congenital malformations, abnormal head circumference) or during delivery (uterine atony, asphyxia, emergency caesarean section). Will be evaluated with yes/ no during the interview by the data collection sheet.

- Prescribed psychiatric medication use: evaluated during the interview by the Case Report Form. It will be categorized as Yes or No, and if the patient is indeed taking any medication, the name of it will be collected.

- Impulsivity. It is widely reported the association of higher impulsivity with increased and early use of different substances. Impulsivity will be measured with the Barrat Impulsiveness Scale for Adolescents (BIS-11-A) (Annex 5), a self-report instrument, included in the data collection sheet. The results will be classified in not- impulsive if scores are <73, and impulsive if >73.

- History of/current conduct disorder, oppositional defiant disorder, attention deficit hyperactivity disorder, depression, posttraumatic stress disorder, anxiety:

diagnosed by the referring psychiatrist during the interview by meeting the DSM-5 criteria.

7.7. Measuring instruments

7.7.1. Childhood Trauma Questionnaire−Short Form (CTQ-SF)

The history of childhood maltreatment (including physical, sexual and emotional abuse and physical and emotional neglect), which will be prior to the study beginning, and therefore prior to age 10 to 12 years, will be assessed using the Childhood Trauma Questionnaire−Short Form (CTQ-SF)(43) (Annex 2). The CTQ-SF is a 28-item self-report instrument for adults and adolescents that assesses retrospective child abuse and neglect. The CTQ-SF was developed from an initial 70-item version (44). The CTQ-SF assesses the following five types of maltreatment: emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. Each scale is represented with five items that are scored on a 5-point Likert-type scale ranging from *1 (never true)* to *5 (very often true)*. Three additional items compose the minimization scale for detecting socially desirable responses or false-negative trauma reports. Therefore, each clinical subscale score ranges from 5 (no history of abuse or neglect) to 25 (very extreme history of abuse and neglect). The final scores are classified according to manual's cut-off scores for the severity of abuse and neglect: ''none to minimal,'' ''low to moderate,'' ''moderate to severe,'' and ''severe to extreme''.

The CTQ-SF has been translated into Spanish by bilingual Spanish and English native speakers. A group of psychologists and psychiatrists checked the translation and referred no major discrepancies and agreed on the final Spanish version.

Based on this questionnaire, the participants will be classified in:

- <u>Maltreated:</u>

Experiences of abuse and/or neglect prior to age 10-12, with corresponding scores of ≥8 for physical abuse, ≥9 for emotional abuse, ≥6 for sexual abuse, ≥10 for emotional neglect and ≥8 for physical neglect.

Nevertheless, more specific categories will be detailed according to the levels of severity of maltreatment.

- Low to moderate: 8-9 for physical abuse, 9-12 for emotional abuse, 6-7 for sexual abuse, 10-14 for emotional neglect and 8-9 for physical neglect.
- Moderate to severe: 10-12 for physical abuse, 13-15 for emotional abuse, 8-12 for sexual abuse, 15-17 for emotional neglect and 10-12 for physical neglect.
- Severe to extreme: ≥13 for physical abuse, ≥16 for emotional abuse, ≥13 for sexual abuse, ≥18 for emotional neglect and ≥13 for physical neglect.

- Non-maltreated:

No experiences of abuse and/or neglect prior to age 10-12, with corresponding scores of ≤7 for physical abuse, ≤8 for emotional abuse, ≤5 for sexual abuse, ≤9 for emotional neglect and ≤7 for physical neglect.

7.7.2. Difficulties with Emotion Regulation Scale

Emotion regulation will be assessed first by the Difficulties with Emotion Regulation Scale (DERS) (45) (Annex 4). The DERS is a multidimensional self-report measure that assesses several related domains of emotion dysregulation (46). This measure is largely based on Linehan's conceptual framework of emotion dysregulation. Within this framework, emotion dysregulation involves difficulty modulating negative affect, difficulty modulating behaviour while experiencing negative affect, limited emotional awareness and clarity, and nonacceptance of emotional responding (47).

Therefore, the DERS is composed of 36-item divided across six specific domains: non-acceptance of negative emotions (6 items), difficulties engaging in goal-directed behaviours when distressed (5 items), difficulties controlling impulsive behaviours when distressed (6 items), limited access to emotion regulation strategies perceived as effective (8 items), lack of emotional awareness (6 items), and lack of emotional clarity (5 items). Items are scored on a 5-point Likert-scale (1 =almost never to 5= almost always). Subscales and total scores are obtained by the sum of the corresponding items,

after reversed when necessary, and higher scores indicate more difficulties in ER (45) (40). Total scores range from 36 to 180. There are no standardized clinical cut-offs for this measure, however prior research suggests that the clinical range on the DERS total score varies from averages of approximately 80 to 127.

Specifically, for the current study will be used the Spanish version of the DERS, which has been reviewed and adapted to Spanish youth in order to guarantee its comprehension, as well as its semantic, linguistic, and conceptual equivalence (48).

7.7.3. Barrat Impulsiveness Scale for Adolescents (BIS-11-A)

The BIS (Annex 5) is one of the most commonly administered self-reports for the assessment of impulsiveness in both research and clinical settings. The Spanish adolescent version of it (49) is composed of 30-item with Likert-type questions in which participants report the frequency of different behaviours (1 if rarely or never, 2 if occasionally, 3 if often or 4 if almost always or always). The total score ranged from 30 to 120, with a cut-off point of 73. Its validation provides a global score and two subscores for the following subcategories:

- General Impulsiveness, which includes items related to attentional, cognitive and motor aspects of impulsiveness, and
- Nonplanning Impulsiveness

7.7.4. Teen- Addiction Severity Index (T-ASI)

The T-ASI (50) (Annex 6) is a semi-structured interview designed to assess the severity of addiction in adolescents ages 12 or older. The instrument includes 142 items divided in seven subscales or domains: substance use, school status, employment status, family function, peer–social relationships, legal status and psychiatric status. Severity of problems in each domain is scored on a five-point scale (0–4) according to both patient subjective criteria and interviewer criteria. The time of administration is 30 to 45 minutes.

The severity of the addiction is assessed based on its need for treatment. The severity is scored from 0 to 4.

- 0: does not have problems, no treatment required.

- 1: mild problem, probably no treatment required.
- 2: moderate problem, some treatment recommended
- 3: severe problem, treatment required
- 4: extreme problem, treatment absolutely required

7.7.5. Wechsler Abbreviated Scale of Intelligence II (WASI-II)

The WASI-II will be used to determine the intelligence level of the participants. This scale is an individually administered intelligence test designed to asses specific and overall cognitive capabilities to people from 6 to 90 years old. It will be used the shortest form of the WASI-II, the two-subtest form: Vocabulary and Matrix Reasoning. Vocabulary measures an examinee's word knowledge, verbal concept formation, fund of knowledge, crystallized intelligence, and degree of language development, while Matrix Reasoning measures fluid and visual intelligence, spatial ability, and perceptual organization. These two subtests are combined to provide an estimate of children's overall IQ.

The time required for its application is of 15 minutes. The test will be administered by the referring psychiatrist in the baseline interview.

7.7.6. Family Affluence Scale (FAS)

The FAS (Annex 3) (51) is a six-item measure of family wealth, developed in the World Health Organization (WHO) Health Behaviour in School-aged Children Study. This scale was created in order to address the difficulties that youth have in reporting family wealth as they usually do not have accurate information on the matter. Therefore, the FAS considers issues adolescents are more likely to know about in order to have a more accurate data of their SES.

FAS regards the material conditions of participant's household (car, own bedroom, holiday frequency, number of computers). Responses are summed on a 0 to 9 point scale, with scores between 0 and 3 indicating low affluence, 4 to 5 indicating medium affluence, and 6 to 9 indicating high affluence.

7.8. Data collection and visits chronogram

The study will require the participation of the professionals -psychiatrist and psychologist- working in the "Centre de Salut Mental Infantil i Juvenil" of Girona. The Mental Health Network of Girona is divided in seven counties: Alt Empordà, Baix Empordà, Gironès i Pla de l'Estany, Garrotxa, Ripoll, Selva Interior and Selva Marítima (Annex 10).

The data belonging to the sample of patients previously recruited, based on accomplishment of the exclusion and inclusion criteria, will be obtained while they attend to their normal check-ups with their referring professional. In those cases discharged from follow-up, the participant will be contacted via telephone to arrange a visit date.

Furthermore, each participant will be interviewed by his/her referring professional in the Mental Health Centre of the county where he/she belongs to. The centre can change depending on the patient's convenience (e.g. change of residence).

7.8.1. Data collection at baseline

In this first exhaustive evaluation, demographic and clinical data will be obtained. The referring professional via a semi-structured interview will first collect the following items:

- Demographic features such as age and gender
- Parental socioeconomic status
- Family history of SUDs
- Complete patient's clinical history including complications during pregnancy or delivery, neurodegenerative diseases and brain damage, developmental abnormalities, important diseases throughout his life
- Current prescribed psychiatric medication
- History of/ current presence of SUD
- Peer substance use
- History of/current conduct disorder, oppositional defiant disorder, attention deficit hyperactivity disorder, depression, posttraumatic stress disorder, anxiety

Next, as part of the same first evaluation and through the previously mentioned measuring instruments, the interviewer will collect data referring to:

- IQ
- Childhood maltreatment history
- Traits of impulsivity
- Difficulties in emotion regulation

During the interview, information will be obtained by asking both the patient and relatives, in order to increase the reliability of collected data, but during the administration of the previously exposed questionnaires it will be only required the presence of the patient, as all of them are self-reports. This will be specially important during the evaluation of CTQ-SF because of the secrecy that often surrounds this issue and the difficulty to talk about it.

7.8.2. Data collection 1st year follow-up

Throughout the first year of follow-up, a second visit will be required in order to assess once more the history of childhood maltreatment* and the appearance of potential confounding factors such as the onset of psychopathology**, the peer substance abuse and the impulsivity. Psychiatric medication will be also reported.

* This procedure will be followed to avoid any bias due to the previously mentioned high concealment of the issue.

** Excluding substance use disorders.

7.8.3. Data collection 3rd year follow-up

During the third year of follow-up will be carried out another evaluation of the previously mentioned confounding factors. Psychiatric medication will be also reported.

7.8.4.Data collection 5th year follow-up

Once the established follow-up period had passed, the participants will attend to a final visit. Its purpose will be the assessment of the presence of any SUD. Also, will

be evaluated, once more, the emotion dysregulation. The professional in charge will carry out a semi-structured interview based on the DSM-5 criteria to evaluate, and in the applying cases, make the diagnosis of the substance use disorder. Moreover, as part of the Case Report Form, the interviewer will ask about the type of the consumed substance, the frequency of use, which ones are the substances used in the past year and in the past 30 days and the severity of the addiction. This last will be assessed by the T-ASI instrument. The possible alterations in emotion regulation will be assessed by the DERS.

Additional details are exposed in the data collection and visits chronogram table.

All the data obtained from participants at baseline and follow-up visits will be registered in the Case Report Form (Annex 9), and according to this form data will be reported in the study database.

DATA COLLECTION AND VISITS CHRONOGRAM						
Data collection	**Baseline**	**First year**	**Second year**	**Third year**	**Fourth year**	**Fifth year**
Informed consent	X					
Demographic features: age, gender	X					
Parental socioeconomic status	X					
Family history of SUDs	X					
Complete patient's clinical history	X					
Current psychiatric medication	X	X		X		X
Peer substance use	X	X		X		X
IQ	X					
History of childhood maltreatment	X	X				
Difficulties in emotion regulation	X					X
Impulsivity	X	X		X		X
History of SUD	X					X
Current SUD	X					X
History of conduct disorder	X					
Current conduct disorder	X	X		X		X
History of oppositional defiant disorder	X					
Current oppositional defiant disorder	X	X		X		X
History of attention deficit hyperactivity disorder	X					
History of attention deficit hyperactivity disorder	X	X		X		X
History of depression	X					
Current depression	X	X		X		X
History of posttraumatic stress disorder	X					
Current posttraumatic stress disorder	X	X		X		X
History of anxiety	X					
Current anxiety	X	X		X		X
Number of visits	1	1	-	1	-	1

8. STATISTICAL ANALYSIS

Statistical analysis will be performed using Statistical Package for Social Sciences (SPSS) for *Windows*®.

8.1. Descriptive analysis

The independent variable, emotion dysregulation, will be statistically considered quantitative variable as it will be measured by a questionnaire with different range of scores.

The dependent variable, substance use disorder, will be treated as binary categorical variable (Presence/Absence), same as the different types of SUD (alcohol, cannabis, stimulants, opioids and hallucinogens). The addiction's severity will be measured also via a questionnaire and therefore considered a quantitative variable.

History of childhood maltreatment will be considered a categorical variable (History/no history of maltreatment, and types of abuse or neglect experienced: physical, sexual and emotional abuse, and physical or emotional neglect).

Most covariates will be considered categorical, with exception of age and all questionnaires/scale scores, which are quantitative variables.

Categorical variables will be expressed as relative frequencies and percentages. Quantitative variables will be described by mean ± standard deviation (when normal distribution) or median and interquartile range (if variables without normal distribution).

8.2. Bivariate statistical inference

Comparisons of variables between exposed and non-exposed group will be carried out using Student-t test or Mann-Whitney test (for quantitative variables) and

Chi-square test or Fisher exact test (for categorical variables). Student-t test will be used for comparing a quantitative variable with a qualitative one.

The analysis of the main objective, that compares substance use disorders among maltreated patients exposed and non-exposed to difficulties in emotion regulation, will be performed using Student-t test. The same test will be used in the analysis of the secondary objectives, as all the variables considered are quantitative.

8.3. Multivariate analysis

The Cox regression analysis will be used to quantify the multivariate-adjusted risk of SUDs between the exposed and non-exposed group. This regression will be adjusted by the different covariables in order to avoid confounders and obtain interpretable results. The validity of the proportionality assumption for each predictor variable will be graphically verified. Results will be expressed as absolute numbers and percentages, means, standard deviations, hazard ratios, and 95% confidence intervals (95% CI). Statistical tests will be considered to be significant for a two-tailed p-value <0.05.

9. WORKPLAN AND CHRONOGRAM

The current study will be carried out for 7 year and 3 months and will be organized in the following phases.

The medical professionals included are:

- Investigators: the psychiatrist in charge of the project, who will collect all the data obtained via the Case Report Form and introduce them in the study database, and a statistical expert, who will help to manage all this data.
- Collaborators: psychiatrist and psychologist of the respective "Centre de Salut Mental Infantil i Juvenil" included in the Girona's Mental Health Network. These professionals will perform the evaluation and data collection of the participants of the study.

1. Phase 1: Coordination (5 months)

The first phase is for coordination. It will run over a period of five months, and it will involve both investigators and collaborators. This first phase is divided into the following steps:

I. Study setting-up: during this first period the protocol will be designed. The principal investigator will have the functions of initiating, managing and ensuring the funding and resources for the study, and will have also to select the work team in charge of the project.

II. Follow-up meetings: at the start point of the study it will be carried out a first face to face meeting with all the investigators and collaborators in the CSMIJ of Girona. There the principal investigator will present the project design and execution plan, and will provide to all of them the appropriate information to ensure that the study will be adequately conducted.

III. Framework establishment: the principal investigator will ensure the participation of the different centres of the province, where the follow-up period will be performed.

IV. Final project design

V. Project evaluation and approval: the principal investigator will ensure the obtainment of the approval from the CEIC (Comitè d'Ètica d'Investigació Clínica) of the "Institut d'Assistència Sanitària de Girona".

2. Phase 2: Participants' inclusion, evaluation and data collection (6 years)

The aim of this phase is the recruitment of patients and collection data. Investigators and collaborators are both involved, like in the first phase.

I. Participants recruitment period: from February 2020 until February 2021 will take place the inclusion of patients from the CSMIJ-Girona, until the sample size is achieved. Investigators and collaborators will make sure that all participants have the informed consent signed by their legal guardian, as they will all be minors. It will be also gathered the child's agreement to participate.

II. Participants evaluation period: this period will start simultaneously with participants' recruitment, but will end five years after the last participant is included in the study. Thus, the evaluation period lasts 6 years. Participants will be evaluated in three times over the whole study, at baseline, at first and at the fifth year of follow-up. All the follow-up visits will be programmed at the baseline point, making them coincide as much as possible with the ones the patient will already scheduled. It will be the participant's referring professional who will be in charge of setting up the visits.

III. Data collection and processing: data will be registered in the study database according to the Case Report Form for each participant. Data collection will finish one month after ending evaluation period. All data collection procedures will be made by the professionals of the Mental Health Centres.

IV. In person meetings: throughout the study will be performed three different meetings with all the working team of the project. Those meeting will serve for discuss the progress of the study and ensure the motivation and internal collaboration of all participating staff. Moreover, the principal investigator will ensure the quality and homogeneity of recruiting and data collection.

3. Phase 3: Data statistical analysis (3 months)

During this third phase, both the main investigator and the statistician will conduct the analysis of the obtained data.

I. Monitoring analysis: two statistical analysis will be performed throughout the study in order to control its progress.
II. Final analysis: at the end of the study, when all data have been collected.

4. Phase 4: Final Report (4 months)

I. Interpretation of results: all the results will be analysed and interpreted, and investigators will perform the final discussion and conclusions of the study.
II. In person meetings: there will be a last meeting in June of 2026 to discuss all the findings that will take place in the CSMIJ of Girona.
III. Final report elaboration

5. Phase 5: Publication and dissemination (3 months)

The final results of this study will be published and disseminated in journal articles, reports, or conference presentations such as the National Congress of Psychiatry.

YEAR
2019
2020
2021
2022
2023
2024
2025
2026
MONTHS
J F MA MJ J A S O N D J F MA MJ J A S O N D J F MA MJ J A S O N D J F MA MJ J A S O N D J F MA MJ J A S O N D J F MA MJ J A S O N D
TASKS
PHASE 1: Coordination
Study setting up
Follow-up meetings
Framework
Final project design
Project evaluation and approval
PHASE 2: Participants' inclusion, evaluation and data collection
Participants recruitment period
Participants evaluation period
Data collecting and processing
In person meetings
PHASE 3: Statistical analysis phase
Monitoring analysis
Final analysis
PHASE 4: Final Report Phase
Interpretation of results
In person meetings
Final report elaboration
PHASE 5: Publication and dissemination
Articles, conferences
Congresses

10. ETHICAL CONSIDERATIONS

This project will be evaluated and approved by the CEIC (Comitè d'Ètica d'Investigació Clínica) of the "Institut d'Assistència Sanitària de Girona".

This study will be conducted in accordance to the human rights and to the ethical tenets defined on the World Medical Association Declaration of Helsinki of "Ethical Principles for Medical Research Involving Human Subjects" of 2013.

Articles included in "Ley 41/2002, del 14 de noviembre, Básica reguladora de la autonomía del paciente y de derechos y obligaciones en materia de información y documentación clínica", will be considered and therefore, before including the patients in the study, they will be informed of the clinical, ethical and legal considerations and given the information sheet. Informed consent will be also provided.

Bearing in mind that the patients participating in the study are minors, the informed consent will have to be signed by the child's legal guardian, as specified in the "Real Decreto 1090/2015 del 4 de diciembre". In case of conflict, the decisions of the minor must prevail, as provided by the "Real Decreto 223/2004, del 6 de febrero".

According to "Ley Orgánica 15/1999, de 13 de diciembre, de Protección de Datos de Carácter Personal" and to the recent Regulation 2016/679 of the European Parliament and of the Council of 27 April 2016, the study will guarantee the confidentiality of all the data obtained during the investigation. Personal data will be able to be object of automatic treatment. Participants of the study have the right to access, modify, oppose or remove their personal data contained in the file at any time.

The authors declare no conflicts of interest.

11. LIMITATIONS

By analysing the present study, some limitations that interfere in the investigation have been detected and considered. The most relevant ones are exposed below:

- Given that the sample will be recruited from the CSMIJ, and not from a paediatric outpatient clinic, and therefore most of the participants will have already consequences derived from the maltreatment or other psychopathology, the sample may not be representative of the whole population.

- Abuse and/or neglect are very private issues with a high concealment. For this reason, may be cases where even if present it is not detected or underestimated. In order to avoid this limitation, high experienced professionals will make the assessments, and the history of maltreatment will be collected in two different occasions, at baseline and at the first year of follow-up, when the physician-patient relationship will be well-stablished.

- Childhood maltreatment is measured retrospectively, what may lead to memory bias if the participants do not remember certain adversities and diminish the reliability of the results. However, the participants will be 10 to 12 years old when reporting this issue and therefore the time past between the exposure and the report is short, reducing the chances of forgetting.

- There are several biological systems affected by trauma, but this study will only evaluate the effects of one neurocognitive system, knowing that others may have an influence in the outcome variable.

- Being a cohort study with a long period of follow-up, 5 years, in which the participants are adolescents, and furthermore, tackles a problem such as the substance use, it is highly probable that the loss of participant is going to be elevated. This limitation has been taken into account and in the calculation of the sample size we considered an estimated loss of 30%. Also, in order to facilitate the follow-up, the phone number of the participant (or child's guard otherwise) will be requested.

12. STRENGTHS

Longitudinal studies that assess whether alterations in emotion regulation during childhood represent a true marker of future psychopathology and thus a true marker of latent vulnerability are widely demanded by the scientific community, given that the majority of the previous studies linking these issues are cross-sectional.

For this reason, this study will provide new evidence about emotion dysregulation as a mediator between childhood maltreatment and psychopathology, specifically adolescent's substance use disorders, as it is one of the most prevalent psychiatric disorder during this period.

It will also be revealed from the current study if emotion dysregulation is maintained or modified over time, permitting the assessment of which are the factors that can make this alteration recover, and therefore creating a new path for preventative interventions towards reducing substance use for at-risk adolescents.

If the mechanisms that confer psychiatric vulnerability following maltreatment are revealed and thoroughly confirmed and proved, we could progress from simply treating those patients with a manifest disorder, to developing effective preventative interventions that help to offset the development of future psychopathology.

13. FEASIBILITY

The "Xarxa de Salut Mental i Addiccions" is part of the "Institut d'Assistència Sanitària" and provides mental health care to the reference population of the province of Girona, which in numbers is about 750.000 inhabitants. Particularly, there are seven "Centres de Salut Mental Infantil i Juvenil" along the province which offer specialized mental health care to children and adolescents from 0 to 18 years old. The number of patients attended in the CSMIJ- Girona aged between 10 to 12, which is the target population of the project, are approximately 1300. We predicted, based on previous research, that about a 15% of the children with current psychopathology will have history of maltreatment. Since our sample size is of 132 participants, in a 1-year period we will be able to recruit the number of participants required.

Other important aspect is that the collaborators of the study will be professionals -psychiatrists and psychologists- working in the same Mental Health Centres, with a long professional experience with the tackled matters and high commitment for collaborate actively in the study, in coordination with the rest of the team.

For the exposed reasons we consider feasible the current study regarding the availability of the participants and the professionals in charge of its development.

14. BUDGET

EXPENSES	**COSTS (€)**
Staff	
Statistical consultant (120h x 20€/h)	**2.400 (x 1 person)**
Material	
Questionnaires, scales and informed consent printing	**2.000**
Publication and dissemination	
Publication in open access journal	**1.500**
Congresses (2 persons) with registration, travel and accommodation	**3.000**
TOTAL	**8.900**

All collaborators -psychiatrists and psychologists- from the Mental Health Centres of Girona who will visit and attend study participants will not receive financial compensation for their work in the research. In the same way, the principal investigator is neither considered in the estimated budget since will be also a psychiatrist working in the Hospital Santa Caterina de Girona.

The meetings that will be carried out throughout the investigation will be held in the facilities of the CSMIJ of Girona. For this reason, no additional costs have been added for the rental of rooms.

In addition, all the validated instruments (questionnaires and scales) that will be applied to the patients are available in all the centres, therefore their cost will be only because of the printing expenses.

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16. ANNEXES

ANNEX 1: DIAGNOSTIC CRITERIA FOR SUBSTANCE USE DISORDER

DSM-5 CRITERIA FOR SUBSTANCE USE DISORDER
A. A problematic pattern of use of an intoxicating substance leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:
1. The substance is often taken in larger amounts or over a longer period than was intended.
2. There is a persistent desire or unsuccessful efforts to cut down or control use of the substance.
3. A great deal of time is spent in activities necessary to obtain the substance, use the substance, or recover from its effects.
4. Craving, or a strong desire or urge to use the substance.
5. Recurrent use of the substance resulting in a failure to fulfil major role obligations at work, school, or home.
6. Continued use of the substance despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of its use.
7. Important social, occupational, or recreational activities are given up or reduced because of the use of the substance.
8. Recurrent use of the substance in situations in which it is physically hazardous.
9. Use of the substance is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.
10. Tolerance, as defined by either of the following: a. A need for markedly increased amounts of the substance to achieve intoxication or desired effect. b. A markedly diminished effect with continued use of same amount of the substance.
11. Withdrawal, as manifested by either of the following: a. The characteristic withdrawal syndrome for other (or unknown) substance.

b. The substance (or a closely related substance) is taken to relieve or avoid withdrawal symptoms.
Specify if: - **In early remission:** after full criteria for other (or unknown) substance use disorder were previously met, none of the criteria for other (or unknown) substance use disorder have been met for at least 3 months but for less than 12 months (with the exception that Criterion A4, "Craving, or a strong desire or urge to use the substance", may be met). - **In sustained remission:** after full criteria for other (or unknown) substance use disorder were previously met, none of the criteria for other (or unknown) substance use disorder have been met at any time during a period of 12 months or longer (with the exception that Criterion A4, "Craving, or a strong desire or urge to use the substance", may be met).

The severity will be specified depending on how many symptoms are identified:

- Mild substance use disorder: 2 or 3 symptoms
- Moderate substance use disorder: 4 or 5 symptoms
- Severe substance use disorder: 6 or more symptoms

* According to the DSM-5, the term we use the term substance use disorder to include substance abuse and substance dependence.

ANNEX 2: CHILDHOOD TRAUMA QUESTIONNAIRE- SHORT FORM (CTQ-SF)

Directions: These questions ask about some of your experiences growing up as a child and a teenager. For each question, circle the number that best describes how you feel. Although some of these questions are of a personal nature, please try to answer as honestly as you can. Your answers will be kept confidential.

	When I was growing up, . . .	Never true	Rarely true	Some times true	Often true	Very Often true
1.	I didn't have enough to eat.	1	2	3	4	5
2.	I knew that there was someone to take care of me and protect me.	1	2	3	4	5
3.	People in my family called me things like "stupid", "lazy", or "ugly".	1	2	3	4	5
4.	My parents were too drunk or high to take care of the family.	1	2	3	4	5
5.	There was someone in my family who helped me feel important or special.	1	2	3	4	5
	When I was growing up, . . .					
6.	I had to wear dirty clothes.	1	2	3	4	5
7.	I felt loved.	1	2	3	4	5
8.	I thought that my parents wished I had never been born.	1	2	3	4	5
9.	I got hit so hard by someone in my family that I had to see a doctor or go to the hospital.	1	2	3	4	5
10.	There was nothing I wanted to change about my family.	1	2	3	4	5
	When I was growing up, . . .					
11.	People in my family hit me so hard that it left me with bruises or marks.	1	2	3	4	5
12.	I was punished with a belt, a board, a cord (or some other hard object).	1	2	3	4	5
13.	People in my family looked out for each other.	1	2	3	4	5
14.	People in my family said hurtful or insulting things to me.	1	2	3	4	5
15.	I believe that I was physically abused.	1	2	3	4	5

When I was growing up, . . .	Never true	Rarely true	Some times true	Often true	Very Often true
16. I had the perfect childhood.	1	2	3	4	5
17. I got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor.	1	2	3	4	5
18. Someone in my family hated me.	1	2	3	4	5
19. People in my family felt close to each other.	1	2	3	4	5
20. Someone tried to touch me in a sexual way or tried to make me touch them.	1	2	3	4	5
When I was growing up, . . .					
21. Someone threatened to hurt me or tell lies about me unless I did something sexual with them.	1	2	3	4	5
22. I had the best family in the world.	1	2	3	4	5
23. Someone tried to make me do sexual things or watch sexual things.	1	2	3	4	5
24. Someone molested me (took advantage of me sexually).	1	2	3	4	5
25. I believe that I was emotionally abused.	1	2	3	4	5
When I was growing up, . . .					
26. There was someone to take me to the doctor if I needed it.	1	2	3	4	5
27. I believe that I was sexually abused.	1	2	3	4	5
28. My family was a source of strength and support.	1	2	3	4	5

Scoring cut offs:

- Emotional Abuse: None=5-8; Low=9-12; Moderate=13-15; Severe=16+
- Physical Abuse: None=5-7; Low=8-9; Moderate=10-12; Severe=13+
- Sexual Abuse: None=5; Low=6-7; Moderate=8-12; Severe=13+
- Emotional Neglect: None=5-9; Low=10-14; Moderate=15-17; Severe=18+
- Physical Neglect: None=5-7; Low=8-9; Moderate=10-12; Severe=13+

ANNEX 3: FAMILY AFFLUENCE SCALE (FAS)

1. *¿Tiene tu familia coche propio o furgoneta?* (0 = no; 1 = sí, una; 2 = sí, dos o más)
2. *¿Tienes un dormitorio para ti solo/a?* (0 = no; 1 = sí)
3. *¿Cuántos ordenadores tiene tu familia?* (incluyendo portátiles y tablets, no incluyendo videoconsolas y smartphones) (0 = ninguno, 1 = uno, 2 = dos, 3 = más de dos);
4. *¿Cuántos baños (habitación con una bañera/ducha o ambas) hay en tu casa?* (0 = ninguno, 1 = uno, 2 = dos, 3 = más de dos);
5. *¿Tiene tu familia un lavavajillas en casa?* (0 = no; 1 = sí);
6. Durante los últimos 12 meses, *¿cuántas veces saliste de vacaciones con tu familia?* (viajar fuera del país) (0 = ninguna, 1 = una vez, 2 = dos veces, 3 = más de dos veces).

La puntuación en el FAS se calcula a través de la suma de las puntuaciones obtenidas en los seis ítems. Las respuestas van de 0 a 13, siendo 0 la capacidad adquisitiva más baja y 13 la más alta.

ANNEX 4: SPANISH VERSION OF THE DIFFICULTIES EMOTION REGULATION SCALE (DERS)

Por favor, indique con qué frecuencia se le pueden aplicar a usted las siguientes afirmaciones rodeando con un círculo el número correspondiente según la escala que aparece a continuación:

1 ----------2----------3----------4----------5

Casi nunca (0-10%)	Algunas veces (11-35%)	La mitad de las veces (36-65%)	La mayoría de las veces (66-90%)	Casi siempre (91-100%)

1.	Tengo claro lo que siento (tristeza, enfado, alegría...).	1	2	3	4	5
2.	Presto atención a cómo me siento.	1	2	3	4	5
3.	Vivo mis emociones como algo desbordante y fuera de control.	1	2	3	4	5
4.	No tengo ni idea de cómo me siento.	1	2	3	4	5
5.	Tengo dificultades para comprender mis sentimientos.	1	2	3	4	5
6.	Estoy atento a mis sentimientos.	1	2	3	4	5
7.	Sé exactamente como me siento.	1	2	3	4	5
8.	Doy importancia a lo que estoy sintiendo	1	2	3	4	5
9.	Estoy confuso/a sobre lo que siento.	1	2	3	4	5
10.	Cuando me siento mal, sé reconocer cuáles son mis emociones (si es de rabia, si es de decepción).	1	2	3	4	5
11.	Cuando me siento mal, me enfado conmigo mismo/a por sentirme de esa manera.	1	2	3	4	5
12.	Cuando me encuentro mal, me da vergüenza sentirme de esa manera.	1	2	3	4	5
13.	Cuando me siento mal, tengo dificultades para sacar el trabajo adelante.	1	2	3	4	5
14.	Cuando me siento mal, pierdo el control.	1	2	3	4	5
15.	Cuando me siento mal, creo que estaré así durante mucho tiempo.	1	2	3	4	5
16.	Cuando me encuentro mal, creo que acabaré sintiéndome muy deprimido/a.	1	2	3	4	5
17.	Cuando me encuentro mal, creo que ese sentimiento es lo adecuado y que es importante.	1	2	3	4	5
18.	Cuando me siento mal, me resulta difícil centrarme en otras cosas.	1	2	3	4	5
19.	Cuando me encuentro mal, me siento fuera de control.	1	2	3	4	5
20.	Cuando me siento mal, puedo conseguir hacer cosas igualmente.	1	2	3	4	5
21.	Cuando me siento mal, me siento avergonzado conmigo mismo/a por sentirme de esa manera.	1	2	3	4	5
22.	Cuando me siento mal, sé que puedo encontrar alguna forma para Conseguir finalmente sentirme mejor	1	2	3	4	5
23.	Cuando me encuentro mal, me siento como si fuera una persona débil.	1	2	3	4	5
24.	Cuando me siento mal, creo que puedo controlar mi comportamiento.	1	2	3	4	5
25.	Cuando me encuentro mal, me siento culpable por sentirme de esa manera.	1	2	3	4	5
26.	Cuando me siento mal, tengo dificultades para concentrarme.	1	2	3	4	5
27.	Cuando me siento mal, tengo dificultades para controlar mi comportamiento.	1	2	3	4	5
28.	Cuando me siento mal, creo que no hay nada que pueda hacer para conseguir sentirme mejor	1	2	3	4	5
29.	Cuando me siento mal, me irrito conmigo mismo/a por sentirme de esa manera.	1	2	3	4	5

30. Cuando me encuentro mal, empiezo a sentirme muy mal sobre mí mismo/a.	1	2	3	4	5
31. Cuando me siento mal, creo que regodearme en ello es todo lo que puedo hacer.	1	2	3	4	5
32. Cuando me siento mal, pierdo el control sobre mi comportamiento.	1	2	3	4	5
33. Cuando me siento mal, tengo dificultades para pensar sobre cualquier otra cosa.	1	2	3	4	5
34. Cuando me siento mal, me doy un tiempo para comprender lo que estoy sintiendo realmente	1	2	3	4	5
35. Cuando me siento mal, tardo mucho tiempo en sentirme mejor	1	2	3	4	5
36. Cuando me siento mal, mis emociones parecen desbordarse.	1	2	3	4	5

- Ítems con puntuación invertida (colocar un signo menos delante): 1, 2, 6, 7, 8, 10, 17, 20, 22, 24 and 34.
- La puntuación total se calcula mediante la suma de cada ítem. Además, hay una puntuación independiente para los seis subapartados valorados en la escala.
- Puntuaciones más altas se corresponden con mayores dificultades en la regulación emocional.

PUNTUACIÓN POR SUBAPARTADOS:

1. No aceptación de respuestas emocionales (NO ACEPTACIÓN): 11, 12, 21, 23, 25, 29
2. Dificultad en llevar a cabo un comportamiento dirigido a un objetivo (OBJETIVOS): 13, 18, 20i, 26, 33
3. Dificultades en el control de impulsos (IMPULSOS): 3, 14, 19, 24i, 27, 32
4. Falta de consciencia emocional (COSNCIENCIA): 2i, 6i, 8i, 10i, 17i, 34i
5. Acceso limitado a estrategias de regulación emocional (ESTRATEGIAS): 15, 16, 22i, 28, 30, 31, 35, 36
6. Falta de claridad emocional (CLARIDAD): 1i, 4, 5, 7i, 9

Clave: (i=inversos).

ANNEX 5: SPANISH ADAPTATION OF THE BARRATT IMPULSIVENESS SCALE FOR EARLY ADOLESCENTS (BIS-11-A)

INSTRUCCIONES: Las personas difieren en la forma en que actúan y piensan en diferentes situaciones. Esta es una prueba para medir algunas de las formas en que usted actúa y piensa. Lea cada enunciado y ponga un círculo en el número apropiado en el lado derecho de esta página. No gaste demasiado tiempo en ninguna declaración. Responda rápida y honestamente.

	1 Nunca/Raramente	2 Ocasionalmente	3 A menudo	4 Casi siempre/ Siempre	
1	Planifico lo que tengo que hacer.	1	2	3	4
2	Hago las cosas sin pensarlas.	1	2	3	4
3	Tomo decisiones rápidamente.	1	2	3	4
4	Soy una persona despreocupada.	1	2	3	4
5	No presto atención a las cosas.	1	2	3	4
6	Mis pensamientos van demasiado rápido.	1	2	3	4
7	Planifico mi tiempo libre.	1	2	3	4
8	Soy una persona que se controla bien.	1	2	3	4
9	Me concentro fácilmente.	1	2	3	4
10	Soy ahorrador.	1	2	3	4
11	No puedo estar quieto en el cine o en la escuela.	1	2	3	4
12	Me gusta pensar y darle vueltas a las cosas.	1	2	3	4
13	Planifico mi futuro.	1	2	3	4
14	Digo cosas sin pensarlas.	1	2	3	4
15	Me gusta pensar en problemas complicados.	1	2	3	4
16	Cambio de parecer sobre lo que quiero hacer cuando sea mayor.	1	2	3	4
17	Actúo impulsivamente.	1	2	3	4
18	Me aburro fácilmente cuando trato de resolver problemas mentalmente.	1	2	3	4
19	Actúo según el momento.	1	2	3	4
20	Pienso bastante bien las cosas.	1	2	3	4
21	Cambio de amigos.	1	2	3	4
22	Compro cosas por impulso.	1	2	3	4
23	Puedo pensar en un solo problema a la vez.	1	2	3	4
24	Cambio de aficiones y deportes.	1	2	3	4
24	Gasto más de lo que debería.	1	2	3	4
25	Cuando pienso en algo, otros pensamientos se agolpan en mi mente.	1	2	3	4

26 Estoy más interesado en el presente que en el futuro.	1	2	3	4
27 Estoy inquieto en los cines y en las clases.	1	2	3	4
29 Me gustan los juegos de tablero como el ajedrez, las damas o el parchís.	1	2	3	4
30 Pienso en el futuro.	1	2	3	4

Consta de 30 cuestiones, agrupadas en:

- Impulsividad general:
  - Impulsividad cognitiva: 4, 7, 10, 13, 16, 19, 24 y 27
  - Impulsividad Motora: 2, 6, 9, 12, 15, 18, 21, 23, 26 y 29
- Impulsividad no planeada: 1, 3, 5, 8, 11, 14, 17, 20, 22, 25, 28 y 30

Cada una de las cuestiones tiene 4 posibles respuestas (raramente o nunca, ocasionalmente, a menudo y siempre o casi siempre) que puntúan como 0-1-3-4, salvo los ítems inversos (1, 5, 6, 7, 8, 10, 11, 13, 17, 19, 22 y 30) que lo hacen al revés (4-3-1-0).

La puntuación total es la suma de todos los ítems y las de las subescalas la suma de los correspondientes a cada una de ellas. Posee mayor valor la puntuación total que la de las subescalas.

ANNEX 6: INVENTARIO DE GRAVEDAD DE LA ADICCIÓN PARA ADOLESCENTES IGA-A (TEEN- ADDICTION SEVERITY INDEX)

Teen-ASI

INFORMACIÓN

Nombre del paciente:.....

Nombre del informante:

.....

Relación del informante con el paciente:.....

Dirección actual.....

N° de identificación (PEEDRO):.....(N° de Historia Clínica): .....
Fecha de admisión (1ª visita):..... /...../...../.....
Fecha de la entrevista:...../...../...../.....
Tipo de entrevista: .....(primera: E1/ seguimiento: E2, E3, E4)
Entrevista llevada a cabo:.....(personalmente, por teléfono)
Género:.....(M= masculino; F= femenino)
Iniciales del entrevistador:.....
Motivo del fin de la entrevista:.....1= el entrevistador suspendió la entrevista; 2= el paciente rehusó ser entrevistado; 3= el paciente fue incapaz de responder.
Fecha de nacimiento:.....

Raza
Blanca
Negra
Asiática
Hispano
Mestizo-biracial
Otra: .....

Religión
Protestante
Católica
Griega ortodoxa
Judía
Islámica
Atea – no creyente
Otra: .....

¿Has estado ingresado/internado en algún centro en el que no tuvieses acceso a drogas (ambiente controlado) durante el año pasado?

a-no
b-en un centro de menores (detención, reclusión, protección)
c-en un centro de tratamiento para drogas
d-en un centro de tratamiento médico
e-en un centro de tratamiento psiquiátrico

¿Cuánto tiempo?.....(días/meses)
Anote las fechas: .....

PERFIL DE GRAVEDAD DE LA ADICCIÓN

Según el paciente / el informante:

ÁREA DE PROBLEMA	Nada	Un poco	Medio	Mucho	Extremo
Drogas	0	1	2	3	4
Estudios	0	1	2	3	4
Trabajo	0	1	2	3	4
Familiar	0	1	2	3	4
Social	0	1	2	3	4
Legal	0	1	2	3	4
Psiquiátrico	0	1	2	3	4

Según el entrevistador:

ÁREA DE PROBLEMA / NECESIDAD DE TRATAM.	No problema	Leve	Moderado	Considerable	Grave
Drogas	0	1	2	3	4
Estudios	0	1	2	3	4
Trabajo	0	1	2	3	4
Familiar	0	1	2	3	4
Social	0	1	2	3	4
Legal	0	1	2	3	4
Psiquiátrico	0	1	2	3	4

0 = Ningún problema. El tratamiento no está indicado.
1 = Problema leve. El tratamiento probablemente no es necesario.
2 = Problema moderado. Algún tratamiento es necesario.
3 = Problema considerable. El tratamiento es necesario.
4 = Problema grave. El tratamiento es absolutamente necesario.

COMENTARIOS:

USO DE DROGAS

1- ¿Qué drogas has tomado/usado durante el último mes?

Droga/s	Nº de días/veces	Edad de inicio (Años/Meses)

2- ¿Has tomado/usado alguna droga en el pasado que no hayas tomado/usado durante el último mes?

Droga/s	Edad de inicio (A/M)	Edad de finaliz. (A/M)	Frecuencia

3- Nombra las combinaciones (mezclas) de drogas y/o alcohol que has hecho durante este último mes:

Drogas	Nº de días/veces

4- ¿Qué droga o combinación de drogas crees que te crea mayor problema?. Haz una lista por orden de problemática.
Droga(s):

5- ¿Por qué crees que esa/esas drogas es/ son la(s) que más te perjudica(n)?. ¿Te crean problemas con...
los amigos o la sociedad?
el trabajo o el sustento económico?
la familia?
la escuela?
las leyes?
síntomas psiquiátricos?
pérdida de control y/o deseo compulsivo/ansia de consumir (*craving*)?

6- Duración de tu último periodo de abstinencia voluntaria a <u>todas</u> las drogas:

7- ¿Cuántos meses hace que finalizó ese periodo de abstinencia?

8- ¿Cuántas veces has experimentado:
pérdidas de memoria (*blackouts*) por el alcohol?
sobredosis por drogas (incluidas borracheras)?

9- ¿Cuántas veces en tu vida has hecho tratamiento por:
abuso o dependencia de alcohol?
abuso o dependencia de otras drogas?
abuso o dependencia de alcohol y otras drogas?

10- ¿Cuántos de esos tratamientos fueron sólo desintoxicaciones de:
alcohol?
drogas?

11- ¿Cuánto dinero dirías que has gastado en el último mes en:
alcohol?
drogas?

12- ¿Alguna/s vez/veces has obtenido drogas a través de:
favores sexuales?
actividades ilegales?

13- ¿Cuántos días has tenido visita de tratamiento ambulatorio por alcohol u otras drogas durante el último mes?

14- ¿A cuántas reuniones de grupos de autoayuda (tipo AA RR, AA AA) has asistido durante el último mes?

15- ¿Cuántos días has asistido a los grupos de autoayuda (tipo AA RR, AA AA) desde tu última reunión de seguimiento?

16- ¿Cuántos días has tenido visita de tratamiento ambulatorio por alcohol u otras drogas desde tu última reunión de seguimiento?

COMENTARIOS:

17- ¿Cuántos días has estado ingresado en algún centro hospitalario o residencial por alcohol / drogas desde tu última visita de seguimiento?

18- ¿Cuántos días durante el último mes has tenido problemas con:
el alcohol?
otras drogas?

19- ¿Cuánto te han preocupado durante el mes pasado esos problemas con:

	Nada	Un poco	Medio	Mucho	Extremo
el alcohol?	0	1	2	3	4
otras drogas?	0	1	2	3	4

7- ¿Cómo de importante es para ti ahora el tratamiento para esos problemas con:

	Nada	Un poco	Medio	Mucho	Extremo
el alcohol?	0	1	2	3	4
otras drogas?	0	1	2	3	4

NIVEL DE GRAVEDAD SEGÚN EL ENTREVISTADOR

21- Valoración de la necesidad de tratamiento del paciente debido a abuso o dependencia de:

	No prob	Leve	Moderado	Consider	Grave
alcohol	0	1	2	3	4
otras drogas	0	1	2	3	4

VALORACIÓN DE LA FIABILIDAD DE LOS DATOS

¿La información anterior puede estar distorsionada significativamente por:
22- falsas declaraciones del paciente? SI NO
23- incapacidad por parte del paciente para comprender? SI NO

ÁREA ESCOLAR

1- ¿Vas a la escuela/instituto? SI NO

2- ¿Cuántos días has faltado a la escuela/instituto durante el último mes?

3- ¿Y en los últimos 3 meses?

4- ¿Cuántos días has llegado tarde a la escuela/instituto en el último mes?

5- ¿Y en los últimos 3 meses?

6- ¿Cuántos días te han castigado en el pasillo o te han expulsado de clase o has estado en el despacho del director de la escuela por mal comportamiento en clase (problemas de disciplina), en el último mes?

7- ¿Y en los últimos 3 meses?

8- ¿Cuántos días has estado expulsado de la escuela/instituto durante el último mes?

9- ¿Y en los últimos 3 meses?

10- ¿Cuántos días te has "saltado" alguna clase (has "hecho campana") durante el último mes?

11- ¿Y en los últimos 3 meses?

12- ¿Cuál fue tu nota media en el boletín de notas de la última evaluación?

13- ¿Cuál fue tu nota media en el último curso (terminado)?

14- ¿Has ayudado a organizar alguna actividad extra-curricular en tu escuela en el último mes? SI NO

COMENTARIOS:

7- ¿Has asistido a alguna actividad extra-escolar en el último mes?
SI NO

16- ¿Cómo has estado de preocupado por esos problemas escolares durante el último mes?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

17- ¿Cómo es de importante para tirecibir ayuda o asesoramiento (*counselling*) para esos problemas escolares?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

NIVEL DE GRAVEDAD SEGÚN EL ENTREVISTADOR

18- Valoración de la necesidad de ayuda escolar (*counselling*):

No problema	Leve	Moderado	Considerable	Grave
0	1	2	3	4

VALORACIÓN DE LA FIABILIDAD DE LOS DATOS

¿La información anterior puede estar distorsionada significativamente por:
19- falsas declaraciones del paciente? SI NO
20- incapacidad por parte del paciente para comprender? SI NO

ÁREA LABORAL

1- Nivel de educación (último curso acabado): ..... (años/meses)

2- Si ya no estudia, ¿Cuándo dejó los estudios?: ..... (años/meses)

3- Formación profesional o técnica acabada: ..... (años/meses)

4- ¿Tienes alguna profesión, oficio o negocio? SI NO ¿Cuál?.....

5- Tipo de empleo durante el último mes:
trabajador o estudiante a tiempo completo (40 h/sem.)
trabajador o estudiante a tiempo parcial (horario regular)
trabajador o estudiante a tiempo parcial (horario irregular)
desempleado

6-Tipo de empleo durante los últimos 3 meses:
trabajador o estudiante a tiempo completo (40 h/sem.)
trabajador o estudiante a tiempo parcial (horario regular)
trabajador o estudiante a tiempo parcial (horario irregular)
desempleado

7- ¿Cuánto tiempo ha durado tu periodo máximo de trabajo/estudio durante el último año?

8- ¿Cuántos días te han pagado por tu trabajo durante el último mes?

9- ¿Y durante los últimos 3 meses?

10- ¿Cuántos días has llegado tarde a tu trabajo durante el último mes?

11- ¿Y durante los últimos 3 meses?

12- ¿Cuántos días has faltado al trabajo durante el último mes?

COMENTARIOS:

13- ¿Y durante los últimos 3 meses?

14- ¿Cuántos días has dejado de ir al trabajo durante el último mes por estar enfermo?

15- ¿Y durante los últimos 3 meses?

16- ¿Cuántas veces te han despedido del trabajo durante el último mes?

17- ¿Y durante el último año?

18- ¿Cuántas veces has dejado un trabajo (por cese de contrato o por voluntad propia) durante el último mes?

19- ¿Y durante los 3 últimos meses?

20- ¿Cómo te has sentido de satisfecho con tu rendimiento en el trabajo durante este último mes?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

21- ¿Y durante el último año?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

22- Si está desempleado: ¿Cuántos días has estado buscando trabajo durante el último mes?

23- ¿Y durante los últimos 3 meses?

24- ¿Cuántos días has tenido problemas para encontrar trabajo o bien problemas en el trabajo en el último mes?

25- ¿Y en los últimos 3 meses?

26- ¿Recibes algún tipo de ayuda económica de algún familiar/amigo o del Gobierno, que suponga la mayoría de tu sustento?

27- Si es así, ¿quién te proporcion a la mayor parte de tu sustento?

28- ¿Qué porcentaje de tus ingresos proviene de actividades ilegales?

29- ¿Cuántas personas dependen de ti para la mayor parte de sus necesidades básicas (alimentación, abrigo, vivienda, etc.)?

30- ¿Cuánto te han preocupado tus problemas laborales durante el último mes?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

31- ¿Cómo es de importante para ti recibir ayuda (*counselling*) para tus problemas laborales?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

NIVEL DE GRAVEDAD SEGÚN EL ENTREVISTADOR

32- Valoración de la necesidad del paciente de recibir ayuda (*counselling*) laboral:

No problema	Leve	Moderado	Considerable	Grave
0	1	2	3	4

VALORACIÓN DE LA FIABILIDAD DE LOS DATOS

¿La información anterior puede estar distorsionada significativamente por:
33- falsas declaraciones del paciente? SI NO
34- incapacidad por parte del paciente para comprender? SI NO

COMENTARIOS:

RELACIONES FAMILIARES

1- ¿Con quién vives actualmente?
con ambos padres (en la misma casa)
con el padre o con la madre (separados)
con otro/s miembro/s de la familia (especificar: .....)
con amigos
con novio/a o esposo/a
solo
en una institución (internado o residencia)
sin vivienda estable

2- ¿Cuánto tiempo hace que vives en esta situación?

3- ¿Estás satisfecho viviendo de esa manera?

4- ¿Has tenido conflictos o problemas importantes con tu/s:

	NO	SI	Último mes	Últimos 3 meses
madre?				
padre?				
hermanos/as?				
otro familiar?				
tutor o responsable?				

5 - ¿Cuántas veces/días en el mes pasado? (anotar en la tabla)

5 bis - ¿Y en los últimos 3 meses? (anotar en la tabla)

6- ¿Cuánto se ayudan/apoyan entre si los miembros de tu familia?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

7- ¿Cuánto discuten/pelean entre sí los miembros de tu familia?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

8- ¿Los miembros de tu familia participan juntos en actividades (lúdicas, de recreo, etc.)?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

9- ¿Cuánto se cumplen las normas y obligaciones en tu casa?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

10- ¿Cómo valorarías el grado de confianza que tienes con tus padres o con tu tutor o persona que se encarga de ti?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

11- ¿En tu familia es posible expresar los sentimientos y las opiniones y ser escuchado y tenido en cuenta por los demás?:

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

12- ¿Has sufrido abusos físicos (te han pegado o te han hecho daño) de algún miembro de tu familia durante el último mes?

13- ¿Y en los últimos 3 meses?

14- ¿Has tenido algún tipo de relación sexual con algún miembro de tu familia (excluido esposo/a) durante el último mes?

15- ¿Y durante los 3 últimos meses?

16- ¿Cómo de preocupado has estado durante este último mes por tus problemas familiares?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

COMENTARIOS:

17- ¿Cómo de importante es para ti recibir ayuda para tus problemas familiares?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

NIVEL DE GRAVEDAD SEGÚN EL ENTREVISTADOR

18- Valoración de la necesidad de ayuda/tratamiento del paciente por sus problemas familiares:

No problema	Leve	Moderado	Considerable	Grave
0	1	2	3	4

VALORACIÓN DE LA FIABILIDAD DE LOS DATOS

¿La información anterior puede estar distorsionada significativamente por:
19- falsas declaraciones del paciente? SI NO
20- incapacidad por parte del paciente para comprender? SI NO

RELACIONES SOCIALES/GRUPO DE PARES

1- ¿Cuántos amigos íntimos tienes?

2- ¿Cuántos de estos amigos íntimos suelen tomar drogas como:
alcohol (habitualmente)?: SÍ NO
marihuana (habitualmente)?: SÍ NO
cocaína (ocasionalmente)?: SÍ NO
otras drogas ilegales (ocasionalmente)?: SÍ NO

3- ¿Cuántos conflictos/discusiones importantes has tenido con tus amigos (exceptuando novio/a) durante el último mes?

4- ¿Y durante los últimos 3 meses?

5- ¿Cómo te sientes de satisfecho con el tipo/la calidad de relación que tienes con tus amigos?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

6- ¿Tienes novio/a? SI NO

7- ¿Cuánto tiempo hace que sois novios?:.....(meses/años)

8- ¿Cuántos/as novios/as has tenido durante el último año?

9- ¿Tu actual novio/a suele tomar:
alcohol (habitualmente)?: SÍ NO
marihuana (habitualmente)?: SÍ NO
cocaína (ocasionalmente)?: SÍ NO
otras drogas ilegales (ocasionalmente)?: SÍ NO

10- ¿En cuántas ocasiones has tenido conflictos/discusiones serias con tu novio/a durante el último mes?:

COMENTARIOS:

11- ¿Y durante los últimos 3 meses?

12- ¿Cómo te sientes de satisfecho con la calidad de la relación con tu novio/a?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

13- ¿Con quién sueles pasar la mayor parte de tu tiempo libre?

□ familia □ novio/a
□ amigos (individualmente) □ solo/a
□ grupo, colegas, panda, basca

14- ¿Cómo has estado de preocupado durante el último mes por los problemas con tus amigos o con tu novio/a?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

15- ¿Cómo de importante es para ti ahora recibir ayuda/tratamiento por los problemas que tienes con tus amigos o con tu novio/a?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

NIVEL DE GRAVEDAD SEGÚN EL ENTREVISTADOR

16- Valoración del grado de necesidad de ayuda del paciente para sus problemas con los amigos:

No problema	Leve	Moderado	Considerable	Grave
0	1	2	3	4

VALORACIÓN DE LA FIABILIDAD DE LOS DATOS

¿La información anterior puede estar distorsionada significativamente por:
17- falsas declaraciones del paciente? SI NO
18- incapacidad por parte del paciente para comprender? SI NO

ÁREA LEGAL

1- ¿Tu visita a este servicio ha sido motivado o sugerido por el sistema de justicia (juez de menores, oficial de justicia)? SI NO

2- ¿Estás en libertad condicional o en libertad bajo palabra (probatoria)? SI NO

3- ¿Cuántas veces en tu vida has sido detenido o arrestado por cometer un delito (ofensa criminal)?

Delito (acusación o cargo)	Edad (años, meses)

4- ¿Cuántas de estas acusaciones (cargos) acabaron en sentencia/condena?

5- ¿Cuánto tiempo has estado detenido o recluido en un juzgado o centro de menores en toda tu vida?: .....(días/semanas/meses)

6- ¿Cuánto tiempo estuviste recluido/encarcelado la última vez?

7- ¿Cuál fue el motivo? (Si son varios motivos, escribir el más grave)

8- ¿Actualmente tienes algún cargo, juicio o sentencia pendiente? SÍ NO

9- ¿Cuál es el motivo? (Si son varios motivos, escribir el más grave)

10- ¿Cuántos días en el último mes has estado detenido o encarcelado?

11- ¿Cuántos días durante el último mes has estado involucrado en actividades ilegales (para provecho personal)?

12- ¿Qué nivel de gravedad crees que tienen tus problemas legales actuales? (excluir problemas del orden civil)

COMENTARIOS:

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

13- ¿Cómo es de importante para ti recibir ayuda/orientación por esos problemas legales?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

NIVEL DE GRAVEDAD SEGÚN EL ENTREVISTADOR

14- Valoración del grado de necesidad del paciente de recibir ayuda/orientación por sus problemas legales:

No problema	Leve	Moderado	Considerable	Grave
0	1	2	3	4

VALORACIÓN DE LA FIABILIDAD DE LOS DATOS

¿La anterior información puede encontrarse distorsionada por:

15- falsas declaraciones del paciente? SI NO

16- incapacidad por parte del paciente para comprender? SI NO

ÁREA PSIQUIÁTRICA / PSICOLÓGICA

1- ¿Cuántas veces has estado en tratamiento por un problema psicológico o emocional?
¿En el servicio de psiquiatría-psicología de un hospital?
¿En un centro ambulatorio o centro privado?

2- ¿Has pasado algún periodo significativo (sin que fuera el resultado directo del consumo de drogas) en el que hayas tenido:

	SI	NO
una depresión importante (grave)?		
ansiedad o tensión importante (grave)?		
delirios (creer cosas que los demás decían que no eran ciertas)?		
alucinaciones (ver u oír cosas que los demás no podían ver/oir)?		
dificultades para concentrarte, recordar o comprender las cosas?		
dificultades para controlar tu comportamiento agresivo/violento?		
pensamientos (graves) de suicidio (ideas de quitarte la vida)?		
alguna/s tentativa/s de suicidio (quitarte la vida)?		

3- ¿Has tomado alguna medicación (prescrita por el médico) para algún trastorno psicológico-psiquiátrico (emocional o de conducta)?

4- ¿Cuántos días durante el último mes has experimentado alguno de los anteriores problemas psicológicos?

5- ¿Cómo valorarías tu grado de preocupación/malestar por los anteriores problemas psicológicos durante el mes pasado?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

6- ¿Cómo de importante es ahora para ti recibir tratamiento para esos problemas psicológicos?

Nada	Un poco	Medio	Mucho	Extremo
0	1	2	3	4

COMENTARIOS:

LOS SIGUIENTES ÍTEMS LOS DEBE RELLENAR EL ENTREVISTADOR

7- En el momento de la entrevista, el paciente:

	SI	NO
está claramente deprimido/muy reservado/retraído		
se muestra claramente hostil		
se muestra claramente ansioso/nervioso		
tiene dificultades con la percepción de la realidad, trastornos del pensamiento o ideas paranoides		
tiene dificultades importantes para comprender, concentrarse o recordar		
tiene ideación suicida		

NIVEL DE GRAVEDAD SEGÚN EL ENTREVISTADOR

8- Valoración del grado de necesidad del paciente de recibir tratamiento psiquiátrico o psicológico.

No problema	Leve	Moderado	Considerable	Grave
0	1	2	3	4

VALORACIÓN DE LA FIABILIDAD DE LOS DATOS

¿La información anterior puede estar distorsionada significativamente por:
9- falsas declaraciones del paciente? SI NO
10- incapacidad por parte del paciente para comprender? SI NO

COMENTARIOS:

ANNEX 7: INFORMATION SHEET

FULL D'INFORMACIÓ PEL PARTICIPANT

Títol de l'estudi: "Role of emotion regulation in the development of substance use disorders among adolescents with history of childhood maltreatment: A longitudinal 5-year follow-up study"

Principals investigadors: Blanca Ivars Ibiza i Domènec Serrano Sarbosa

Benvolgut, benvolguda,

Agraïm la seva participació en aquest estudi que estem realitzant des de la Xarxa de Salut Mental a la província de Girona. El consum de substàncies és un problema de rellevància mundial i especialment durant l'etapa de l'adolescència, què ha estat definit com el període de desenvolupament amb major risc d'aparició d'un consum problemàtic d'alcohol i altres drogues. Aquesta situació te múltiples repercussions tant pels propis adolescents com per les seves famílies i la comunitat.

Davant un problema com aquest, la investigació científica ha de ser-hi al capdavant. La seva col·laboració és de gran ajuda per poder desenvolupar de manera adient projectes científics com aquest. A continuació li expliquem amb detall quins són els motius pels que demanem la seva participació en aquest estudi, per tal que pugui decidir amb més criteri si està interessat/da o no a col·laborar en l'estudi.

Llegeixi detingudament la següent informació i prengui's el temps que cregui convenient per fer-ho. No dubti en consultar qualsevol aspecte amb la persona que li entrega el document quan ho consideri necessari. Li recordem que la seva participació és totalment voluntària, i que si decideix no participar, això no afectarà de cap manera al tracte del professionals sanitaris cap a vostè.

Generalitats del projecte

L'estudi serà dut a terme per un grup de professionals de la Xarxa de Salut Mental i Addiccions de Girona. El temps de seguiment requerit dels nostres participants serà de 5 anys. El projecte de recerca ha estat valorat i aprovat pel Comitè d'Ètica d'Ínvestigació Clínica de l'Institut d'Assistència Sanitària de Girona.

Objectius i finalitats de l'estudi

Un dels factors de risc més importants pel consum de substàncies durant l'adolescència és haver patit algun esdeveniment traumàtic durant la infància. Aquests tenen la capacitat de produir canvis psíquics i fisiològics que afecten al normal desenvolupament i funcionament del nen. Amb tot això, l'objectiu del present estudi és valorar l'impacte que té una d'aquestes alteracions, la dificultat en la regulació emocional, en el desenvolupament de trastorns de consum de substàncies durant l'etapa de l'adolescència.

Participació

La seva participació en l'estudi es totalment voluntària. El participant és lliure d'abandonar l'estudi si així ho desitja en qualsevol moment, sense necessitat de justificacions i sense que aquesta decisió afecti a la seva assistència sanitària. La participació en aquesta investigació és totalment gratuïta i no s'obtindrà cap compensació econòmica en relació a la participació.

Els participants seran entrevistats en el moment en què entrin a l'estudi, per elaborar una història clínica (antecedents personals i familiars) i fer una avaluació psiquiàtrica completa. Per fer aquesta avaluació, cada participant haurà de respondre una sèrie de breus qüestionaris que seran proporcionats i avaluats per l'equip mèdic. Aquesta serà realitzada al seu Centre de Salut Mental Infantil i Juvenil (CSMIJ) de referència.

Durant els següents 5 anys, els participants tindran únicament una visita a l'any, als tres anys i una visita final quan hagin passat els 5 anys. Totes aquestes visites seran realitzades pel seu psiquiatra o psicòleg referent. Per tant, només hi haurà 4 visites en

tot el seguiment. Aquestes visites coincidiran amb alguna de les visites habituals que cada pacient ja tingui concertada amb el seu psiquiatra, independentment de si hagués entrat o no a l'estudi. Per tant, els participants no hauran d'anar a visitar-se més vegades de les que ho haurien fet si no haguessin entrat a formar part del nostre estudi. Aquestes visites es faran igualment al centre on els participants siguin normalment atesos. Durant aquestes visites de seguiment, els pacients hauran de respondre també algun breu qüestionari com van fer a l'inici de l'estudi.

No es derivarà cap risc or perjudici de la seva participació. Només s'haurà de respondre les preguntes que el seu psiquiatra els faci a cada visita i omplir algun qüestionari, com s'ha comentat.

Confidencialitat i protecció de dades

S'aplicaran les mesures necessàries per tal de garantir la confidencialitat de les seves dades en compliment de la Llei Orgànica 15/1999 de Protecció de Dades de Caràcter Personal. i el nou reglament de la Unió Europea 2006/679. Per això, les dades seran gestionades de manera anònima i només s'utilitzaran amb fins d'investigació.

Resultats i beneficis de la investigació

El participant està en el seu dret de ser informat dels resultats obtinguts de la investigació, així com es respectarà la seva voluntat de no ser informat en cas que així ho desitgi. Els resultats derivats de la investigació, podran beneficiar altres persones afectades d'aquest trastorn i serviran de base per futures investigacions.

HOJA DE INFORMACIÓN PARA EL PARTICIPANTE

Título del estudio: "Role of emotion regulation in the development of substance use disorders among adolescents with history of childhood maltreatment: A longitudinal 5-year follow-up study"

Principales investigadores: Blanca Ivars Ibiza y Domènec Serrano Sarbosa

Estimado, estimada,

Agradecemos su participación en este estudio que estamos realizando desde la Red de Salud Mental de la provincia de Girona. El consumo de sustancias es un problema de relevancia mundial y especialmente durante la etapa de la adolescencia, que se ha definido como el período de desarrollo con mayor riesgo de aparición de un consumo problemático de alcohol y otras drogas. Dicha situación tiene numerosas repercusiones tanto para los adolescentes como para sus familias y la comunidad.

Ante este problema, la investigación científica tiene una labor muy importante. Su colaboración es de gran ayuda para poder desarrollar de forma adecuada el proyecto científico. A continuación, le explicamos con detalle cuáles son las razones por las que le pedimos su participación en el estudio, para que pueda decidir con más criterio si está interesado/a o no en colaborar en el estudio.

Lea atentamente la siguiente información y tómese el tiempo que considere apropiado para hacerlo. No dude en consultar cualquier aspecto con la persona que le proporciona el documento cuando lo considere más necesario. Le recordamos que su participación es totalmente voluntaria y que, en caso de no querer participar, ello no afectará de ninguna manera la atención de los profesionales de la salud hacia usted.

Generalidades del proyecto

El estudio será realizado por un grupo de profesionales de la Red de Salud Mental y Adicciones de Girona. El tiempo de seguimiento requerido de nuestros

participantes será de 5 años. El proyecto de investigación ha sido valorado y aprobado por el Comité de Ética de Investigación Clínica de "l'Institut d'Assistència Sanitària" de Girona.

Objetivos y finalidades del estudio

Uno de los factores de riesgo más importantes para consumo de sustancias durante la adolescencia es haber sufrido algún evento traumático durante la infancia. Éstos tienen la capacidad de producir cambios psíquicos y fisiológicos que afectan al normal desarrollo y funcionamiento del niño. Con todo ello, el objetivo del presente estudio es valorar el impacto que tiene una de estas alteraciones, la dificultad en la regulación emocional, en el desarrollo de trastornos de consumo de sustancias durante la etapa de la adolescencia.

Participación

Su participación en el estudio es totalmente voluntaria. El participante es libre de abandonar el estudio si lo desea en cualquier momento, sin necesidad de justificaciones, y sin que esta decisión afecte a su atención médica. La participación en esta investigación es totalmente gratuita y no se obtendrá ninguna compensación económica por ello.

Los participantes serán entrevistados en el momento de inicio del estudio, con la finalidad de elaborar una historia clínica (historia personal y familiar) y para hacer una evaluación psiquiátrica completa. Para hacer esta evaluación, cada participante debe responder una serie de preguntas y breves cuestionarios que le serán proporcionados, y posteriormente evaluados por el equipo médico. Todo ello tendrá lugar en su Centro de Salud Mental Infantil y Juvenil (CSMIJ) de referencia.

Durante los siguientes 5 años, los participantes asistirán únicamente a una visita durante el primer año, a los tres años y una última una vez ya hayan pasado los 5 años. Todas estas visitas serán realizadas por el psicólogo o psiquiatra de referencia del niño. Por lo tanto, sólo habrá 4 visitas a lo largo del seguimiento. Estas visitas coincidirán con una de las visitas habituales que el paciente tenga programadas con su psiquiatra o psicólogo. Por ello, los participantes no tendrán ser visitados más veces de las que se

habrían visitado si no se hubieran unido a nuestro estudio. Estas visitas también se realizarán en el mismo centro donde son habitualmente atendidos. Durante estas visitas de seguimiento, los pacientes tendrán que responder un breve cuestionario como ya hicieron al inicio del estudio.

No se derivará ningún riesgo o perjuicio de su participación, dado que únicamente se le pedirá responder a las preguntas que su psiquiatra le hará en cada visita y rellenar una serie de cuestionarios, como se mencionó anteriormente.

Confidencialidad y protección de datos

Se aplicarán las medidas necesarias para garantizar la confidencialidad de sus datos en cumplimiento de la Ley Orgánica 15/1999 de Protección de Datos de Carácter Personal y el nuevo reglamento de la Unión Europea 2006/679. Por ello, los datos serán tratados de forma anónima y solo se utilizarán con fines de investigación.

Resultados y beneficios de la investigación

El participante está en su derecho de ser informado de los resultados obtenidos de la investigación, de igual modo que se respetará su voluntad de no ser informado en caso de que así lo desee. De los resultados derivados de la investigación podrán beneficiarse otras personas afectadas por este trastorno y servirán de base a futuras investigaciones.

ANNEX 8: INFORMED CONSENT

FULL DE CONSENTIMENT INFORMAT

Títol de l'estudi: "Role of emotion regulation in the development of substance use disorders among adolescents with history of childhood maltreatment: A longitudinal 5-year follow-up study"

Jo (Nom i Cognoms): _____

Afirmo que:

- He llegit la fulla informativa sobre l'estudi que se m'ha entregat
- He pogut fer totes les preguntes necessàries per resoldre els dubtes que tenia respecte l'estudi
- He rebut tota la informació necessària sobre l'estudi
- He entès la informació proporcionada sobre la meva participació a l'estudi
- He estat informat per l'investigador _____ de les implicacions i finalitats de l'estudi
- Entenc que la meva participació és voluntària i que en qualsevol moment de l'estudi puc decidir deixar de participar i, a més, sense haver de donar cap explicació
- Entenc que totes les meves dades seran tractades de manera estrictament confidencial
- Entenc quin serà el meu paper com a participant de l'estudi

Amb tot això present, ACCEPTO voluntàriament participar en l'estudi.

I dono permís per tal que els investigadors del projecte contactin amb mi per via telefònica per a concretar les visites de seguiment, en cas que hagués sigut donat d'alta del Centre de Salut Mental.

Signatura del participant i tutor legal Signatura de l'investigador

_____ , _____ de _____ de 20

HOJA DE CONSENTIMIENTO INFORMADO

Título del estudio: "Role of emotion regulation in the development of substance use disorders among adolescents with history of childhood maltreatment: A longitudinal 5-year follow-up study"

Yo (Nombre y Apellidos): _____

Afirmo que:

- He leído la hoja informativa sobre el estudio que se me ha entregado
- He podido hacer todas las preguntas necesarias para resolver las dudas que tenía respecto el estudio
- He recibido tota la información necesaria sobre el estudio
- He entendido la información dada respecto mi participación en el estudio
- He sido informado por el investigador _____ de las implicaciones y finalidades del estudio
- Entiendo que mi participación es voluntaria y que en cualquier momento de puedo decidir dejar de participar sin tener que dar explicaciones al respecto
- Entiendo que todos mis datos serán tratados de forma estrictamente confidencial
- Entiendo cuál será mi papel como participante del estudio

Con todo ello presente, ACCEPTO voluntariamente participar en el estudio.

Y doy permiso para que los investigadores del proyecto contacten conmigo por vía telefónica para concretar las visitas de seguimiento, en caso de que hubiera sido dado de alta del Centro de Salud Mental.

Firma del participante y del tutor legal Firma del investigador

_____ , _____ de _____ de 20

ANNEX 9: CASE REPORT FORM

CASE REPORT FORM

Participant number: _____

BASELINE DATA

PERSONAL DATA:

- **Age:** _____
- **Birth date (DD/MM/YY):** _____/_____/_____
- **Gender:** Male ☐ Female ☐
- **IQ:** Low ☐ Normal ☐
- **Socioeconomic Status:**
  - Parental occupational status (active worker, housework or unemployed). If active, specify where and doing what labour.

    _____
  - Educational level (None/Primary/Secondary/ University, finished or unfinished):

    _____
  - How rich or wealthy do you think your family is?

    1 (poor)/ 2 (not much poor)/ 3 (normal)/ 4 (rich)/ 5 (very rich)
  - Family Affluence Scale:
    1. Does your family own a car or another motorized vehicle?

       No/ Yes, one/ Yes, two
    2. Do you have your own bedroom?

       No/ Yes
    3. How many computers (including laptops and tablets, not including game consoles and smartphones) does your family own?

       None/ One/ Two/ More than two

4. How many bathrooms (room with a bath/shower or both) are there in your home?

   None/ One/ Two/More than two

5. Does your family have a dishwasher?

   No/ Yes

6. How many times did you and your family travel out of Spain for holiday/vacation last year?

   Never/ Once/ Twice/ More than twice

FAMILY HISTORY

- **Are your father or mother diagnosed of any psychiatric disorder?**

  Father: Yes ☐ No ☐

  Mother: Yes ☐ No ☐

- **Are your dad or mum diagnosed of substance use disorder, or do your parents often use any substance?**

  Father: Yes ☐ No ☐

  Mother: Yes ☐ No ☐

  If so, which one is the substance? _____

  If so, is it accessible to get any substance in your household?

  Yes ☐ **No** ☐

PERSONAL HYSTORY

- **Medical history:** _____
- **Did your mother have any complication during pregnancy or delivery?**

  Yes ☐ No ☐

PERSONAL PSYCHIATRIC HISTORY

- **Are you/ Have you been diagnosed of any of the following disorders?**
  - Conduct disorder ☐
  - Oppositional defiant disorder ☐
  - Attention deficit-hyperactivity disorder ☐
  - Depression ☐

- Anxiety ☐
- Posttraumatic stress disorder ☐

- **Are you/ Have you even been diagnosed of any substance use disorders? If so, which one?**

  _____

- **Are you currently taking any prescribed psychiatric medication? If so, which one?**

  _____

HISTORY OF CHILDHOOD MALTREATMENT (CTQ-SF)

Yes ☐ No ☐

- **Type (s) of childhood maltreatment experienced:**

  Physical abuse ☐ Physical neglect ☐

  Sexual abuse ☐ Emotional neglect ☐

  Emotional abuse ☐

- **CTQ-SF score:** _____

PEER SUBSTANCE ABUSE

- **Do you think any of your three best friends consume any drug at least once a month?**

  Any ☐ None ☐

IMPULSIVITY

Yes ☐ No ☐

- **BIS-11-A score**: _____

DIFFICULTIES IN EMOTION REGULATION (DERS)

Yes ☐ No ☐

- **DERS score**: _____

FOLLOW-UP DATA

FIRST YEAR FOLLOW-UP

HISTORY OF CHILDHOOD MALTREATMENT (CTQ-SF)

Yes ☐ No ☐

- **Type (s) of childhood maltreatment experienced:**

Physical abuse ☐ Physical neglect ☐

Sexual abuse ☐ Emotional neglect ☐

Emotional abuse ☐

- **CTQ-SF score:** _____

PEER SUBSTANCE ABUSE

- **Do you think any of your three best friends consume any drug at least once a month?**

Any ☐ None ☐

IMPULSIVITY (BIS-11-A)

Yes ☐ No ☐

- **BIS-11-A score**: _____

CURRENT PSYCHOPATHOLOGY

- Conduct disorder ☐
- Oppositional defiant disorder ☐
- Attention deficit-hyperactivity disorder ☐
- Depression ☐
- Anxiety ☐
- Posttraumatic stress disorder ☐

- **Are you currently taking any prescribed psychiatric medication? If so, which one?**

_____

THIRD YEAR FOLLOW-UP

PEER SUBSTANCE ABUSE

- **Do you think any of your three best friends consume any drug at least once a month?**

  Any ☐ None ☐

IMPULSIVITY (BIS-11-A)

Yes ☐ No ☐

- **BIS-11-A score**: _____

CURRENT PSYCHOPATHOLOGY

- Conduct disorder ☐
- Oppositional defiant disorder ☐
- Attention deficit-hyperactivity disorder ☐
- Depression ☐

- Anxiety ☐
- Posttraumatic stress disorder ☐

- **Are you currently taking any prescribed psychiatric medication? If so, which one?**

_____

FIFTH YEAR FOLLOW-UP

PEER SUBSTANCE ABUSE

- **Do you think any of your three best friends consume any drug at least once a month?**

  Any ☐ None ☐

IMPULSIVITY (BIS-11-A)

Yes ☐ No ☐

- **BIS-11-A score**: _____

CURRENT PSYCHOPATHOLOGY

- Conduct disorder ☐
- Oppositional defiant disorder ☐
- Attention deficit-hyperactivity disorder ☐
- Depression ☐
- Anxiety ☐
- Posttraumatic stress disorder ☐

- **Are you currently taking any prescribed psychiatric medication? If so, which one?**

_____

SUBSTANCE USE DISORDERS

- **Diagnosis according to the DSM-5 criteria: Yes** ☐ **No** ☐
- **Type of substance use diagnosis (Alcohol/ Tobacco/ Cannabis/ Stimulants (as cocaine and methamphetamine)/ Opioids/ Hallucinogens):**
  - **Only one:** _____
  - **Polydrug:** _____
- **Age at diagnosis:** _____
- **Of the previous substances, which ones have you consumed during the last year?**

  None ☐ **Some** _____

  And during this last 30 days?

  None ☐ **Some** _____
- **How frequently were you consuming?**

	Daily		Weekly		Monthly		Yearly	
	Once	>Once	Once	>Once	Once	>Once	Once	>Once
Alcohol								
Tobacco								
Cannabis								
Stimulants								
Opioids								
Hallucinogens								

- **Addiction severity (T-ASI):**

  Severe ☐ Not severe ☐

  Score: _____

DIFFICULTIES IN EMOTION REGULATION (DERS)

Yes ☐ No ☐

- **DERS score**: _____

ANNEX 10: "XARXA DE SALUT MENTAL I ADICCIONS"

The "Xarxa de Salut Mental I Adiccions (XSMA) del Institut d'Assistència Sanitària (IAS)" is the public mental health network of Girona's province, which has a total population of 761.947 inhbitants.

The network is organized mainly in two areas: hospital care and community care, both in permanent communication.

Within hospital care, we find:

- "Unitat d'Hospitalització d'Aguts" (UHA): this unit aims to provide comprehensive health care for acute episodes; therefore, hospitalization times are meant to be short. Attends people 18 or older. It has capacity for 42 people.
- "Unitat de Referència en Psiquiatria Infantil i Juvenil" (URPIJ): this unit is specialized in acute episodes for people under 18. It has a capacity for 10 users.

This two units are located within the "Parc Hospitalari Martí I Julià de Salt".

Regarding community care, we find:

- "Centres de Salut Mental d'Adults" (CSMA), dedicated to specialized care in matters of mental health for people 18 or over.
- "Centres de Salut Mental Infantil i Juvenil" (CSMIJ), dedicated to specialized care in matters of mental health for people under 18.
- "Equips d'Intervenció Precoç a la Psicosi" (EIPP), who manage the care of those patients who have a first psychotic episode or are at risk for its development.

These centres are located all around the different counties of Girona: "Gironès- Pla de l'Estany", "Alt Empordà", "Baix Empordà", "Garrotxa", "Ripollès", "Selva Interior" and "Selva marítima".

"Xarxa de Salut Mental i Adiccions" Map: