International Journal of Social Science and Human Research

ISSN (print): 2644-0679, ISSN (online): 2644-0695

Volume 09 Issue 08 August 2026

DOI: 10.47191/ijsshr/v9-i8-47, Impact factor- 8.361

Page No: 7092-7104

The Psychological Effects of Childhood Trauma on Suicidal Behaviour

Dr. Bekir Cem AYDIN

St Clements University - Alumni Member, ORCID-0009-0006-7922-5617

ABSTRACT: Traumatic experiences during childhood are among the most consistently reported long-term predictors of mental health problems and suicidal behaviour. This review examines the relationship between adverse childhood experiences—particularly physical, sexual and emotional abuse, as well as neglect—and suicidal ideation, suicide attempts and self-harm behaviour, within the framework of the neurobiological, emotional, cognitive and interpersonal mechanisms mediating this relationship. Recent meta-analyses and large-scale epidemiological studies indicate that different types of abuse increase the likelihood of suicide attempts in adulthood by approximately two to five times, and that the risk rises in a dose-dependent manner with cumulative exposure. The findings suggest that dysregulation of the hypothalamic-pituitary-adrenal axis, an imbalance between the amygdala and the prefrontal cortex, difficulties with emotion regulation, schemas of hopelessness and insecure attachment patterns form interacting pathways linking trauma to suicidal behaviour. Among protective factors, a safe family environment, supportive school and community resources, and cognitive resilience stand out. From a clinical perspective, there is evidence that trauma-focused psychotherapies and approaches targeting emotion regulation, such as dialectical behaviour therapy, reduce self-harm. In this context, early diagnosis, trauma-informed care and multi-component prevention programmes appear to be crucial in reducing risk.

KEYWORDS: childhood trauma, suicidal behaviour, adverse childhood experiences, emotion regulation, attachment, hopelessness, prevention.

1. INTRODUCTİON

Suicide is one of the most serious public health issues today and stems from the complex interaction of social, cultural, biological, psychological and environmental factors. According to World Health Organisation data, approximately 727,000 people take their own lives each year, whilst many more attempt to do so; suicide is the third leading cause of death among those aged 15 to 29, and approximately 73 per cent of global suicides occur in low- and middle-income countries (World Health Organisation, 2025). Behind this picture lies not a single cause, but a lifetime of accumulating risk processes. When we trace suicidal behaviour back to the beginning of a person's life story, we frequently encounter traumatic experiences from childhood.

The global burden of suicide is not limited to cases resulting in death. Behind every suicide lie numerous attempts, an even greater number of suicidal thoughts, and a wide circle of loved ones affected by these experiences. The fact that a significant proportion of this burden is concentrated in young people further exacerbates the problem in terms of lifelong productivity and social costs. Furthermore, evidence that reductions in suicide rates are a preventable outcome demonstrates that timely and evidence-based interventions can make a difference. This picture necessitates treating suicide not as an inevitable tragedy, but as a public health issue that can be systematically addressed; childhood trauma, in particular, represents one of the most effective points of intervention in this endeavour.

The psychology of suicidal behaviour is shaped by the transitions between the formation of thoughts of ending one's life and the transformation of these thoughts into action. When assessed in isolation, this process is often intertwined with depression, bipolar disorder and impulse control problems; however, these diagnostic presentations typically arise against a deeper developmental backdrop. Feelings of hopelessness, loss of control and loneliness are the core psychological dynamics that fuel suicidal thoughts, and their origins frequently trace back to early relational experiences (Turecki and Brent, 2016). Understanding the psychological effects of traumatic events experienced in childhood therefore provides a crucial starting point for identifying risk.

Conceptual clarity is required when defining suicidal behaviour. When the literature groups interrelated but distinct phenomena under a single heading, both research findings and clinical assessment become obscured. Suicidal ideation refers to thoughts and desires to end one's life; a suicide attempt refers to a self-destructive act that does not result in death but is carried out with the intention of dying; and death by suicide refers to the outcome of such an act resulting in death. In addition, self-harm behaviour carried out without the intention to die is treated as a separate phenomenon, although it may serve as a strong predictor of a future

suicide attempt. These distinctions are necessary for interpreting the findings of the review, given that the relationship between childhood trauma and each of these outcomes may differ.

The foundation of the contemporary understanding of the long-term consequences of childhood trauma is based on the Adverse Childhood Experiences (ACE) study. Felitti and colleagues' pioneering 1998 study demonstrated that childhood abuse, neglect and family dysfunction are strongly and dose-dependently associated with physical and mental ill health in adulthood (Felitti et al., 1998). Evidence accumulated since this study has shown that individuals reporting four or more adverse experiences are at a much higher risk of lifetime suicide attempts compared to those reporting none (Hughes et al., 2017). These findings necessitate viewing childhood trauma not merely as a memory, but as a lasting pattern embedded within the developing brain and the world of relationships.

Understanding how risk factors are organised is also essential to making sense of this picture. Factors that increase the risk of suicide typically cluster at the individual, family and societal levels and interact with one another to determine the overall burden. At the individual level, low self-esteem, hopelessness, impulsivity and difficulties with emotional regulation are prominent; at the family level, violence, abuse, neglect and the loss of a parent; and at the societal level, poverty, social exclusion and inadequate support systems. None of these factors is determinative on its own; what truly elevates the risk is their co-occurrence and mutual reinforcement. As childhood trauma affects many of these levels simultaneously, it increases the risk particularly significantly.

However, whilst the existence of a link between childhood trauma and suicidal behaviour has now been established, the key question facing the field is the mechanisms through which this link is established. Not every individual exposed to trauma develops suicidal behaviour; risk is shaped by the balance between mediating processes and protective factors. Neurobiological changes, impaired emotional regulation, hopelessness-based cognitive schemas and insecure attachment patterns are the primary pathways through which this link is mediated. Distinguishing between these pathways is valuable both for predicting which individuals are at higher risk and for directing interventions towards appropriate targets (Angelakis et al., 2019).

The association with mental disorders is an integral part of this picture. Childhood abuse and neglect significantly increase the likelihood of developing depression, post-traumatic stress disorder, anxiety disorders, substance use disorders and personality disorders in adulthood; each of these disorders, in its own right, elevates the risk of suicide. Thus, trauma is linked to suicidal behaviour both directly and indirectly through these diagnostic conditions. However, the presence of a psychiatric comorbidity does not fully explain the relationship; the risk of suicide in individuals exposed to trauma remains high even after accounting for mental disorder diagnoses. This indicates that the effects of trauma are mediated not only through a disorder but also directly via psychological and neurobiological mechanisms (Afifi et al., 2008).

The aim of this review is to examine the psychological effects of childhood trauma on suicidal behaviour within an integrated framework. Throughout the study, the conceptualisation of suicidal behaviour and the quantitative dimension of its relationship with adverse childhood experiences will first be addressed; subsequently, the neurobiological, emotional, cognitive and interpersonal mechanisms mediating this relationship will be discussed in turn. Subsequently, protective factors, sources of resilience and evidence-based clinical interventions will be evaluated. The review will conclude with a comprehensive discussion examining the methodological limitations of the field, along with concrete recommendations for future research and practice. The aim is thus to synthesise the scattered literature into a coherent model that can inform clinical decision-making and prevention policies.

2. MATERİALS AND METHODS

This study is designed as a narrative review aimed at integrating the relationship between childhood trauma and suicidal behaviour, as well as the psychological mechanisms mediating this relationship. The narrative review approach was chosen as it allows for the synthesis of evidence from different methodological traditions (meta-analyses, prospective cohort studies, cross-sectional studies and neuroimaging findings) within a single conceptual framework. This design does not involve the quantitative pooling process typical of a strict systematic review; instead, it focuses on relating findings at different levels around a theoretical model.

The literature search utilised the PubMed, PsycINFO, Web of Science, Scopus and Cochrane databases. The search was based on combinations of key terms in English and Turkish; the main terms included childhood trauma, childhood abuse and neglect, adverse childhood experiences, suicidal ideation, suicide attempts, self-harm, emotion regulation, attachment, hopelessness and neurobiology. Priority was given to meta-analyses and large-sample studies published in the last decade; however, pioneering sources forming the conceptual foundation of the field (such as attachment theory, hopelessness theory and the interpersonal theory of suicide) were included regardless of publication date.

In the selection of studies, priority was given to those that directly examined the relationship between adverse childhood experiences and suicidal ideation, attempts or self-harm behaviour; or that addressed the psychological and neurobiological mechanisms mediating this relationship. Findings from both clinical and community samples were included, with greater weight given to studies that reported effect sizes and confidence intervals. The evidence obtained was thematically grouped along the axes of exposure, mediating mechanisms and outcomes, and interpreted within the framework of the integrated biopsychosocial model summarised in Figure 1.

As a methodological framework, all quantitative findings reported are based on relevant primary sources; odds ratios, correlation coefficients and effect sizes are presented as published. Given the sensitive nature of the subject matter, clinical care has been exercised in the presentation, and methodological details have been explained. It is acknowledged that the narrative review design may be selective and subject to publication bias; this limitation is further addressed in the Discussion section.

3. FİNDİNGS

3.1. Conceptualisation of Suicidal Behaviour

Suicidal behaviour is not a single event but a series of processes. In this process—which extends from passive suicidal ideation (the thought that it would be better not to be alive) to active ideation, then to planning, attempt and finally to an act resulting in death—each transition carries different psychological burdens and different risk factors. This distinction is not merely a theoretical nuance but a clinical necessity; for the factors predicting suicidal ideation are not always the same as those predicting the transition from thought to action. For example, whilst hopelessness is strongly associated with ideation, the capacity to act is linked to resilience acquired in the face of pain and fear (Van Orden et al., 2010).

The development of suicidal ideation is most often associated with a combination of intense feelings of hopelessness, helplessness, inner emptiness and a sense of loss of control. These feelings do not take on meaning in isolation, but in conjunction with the individual's coping capacity and relational resources. In situations where stress management skills are weakened and intense emotions cannot be regulated, suicide may be perceived as the only way to escape what seems to be unbearable inner pain. For this reason, suicidal behaviour should be viewed not merely as a symptom of mental disorders, but as an extreme manifestation of the way an individual relates to the pain within their inner world.

Viewing suicidal behaviour as a process requires acknowledging that the level of risk changes over time. An individual's level of risk is not static; against a backdrop of chronic vulnerability, it fluctuates, rising and falling in response to specific triggers. Childhood trauma typically resides within the layer of chronic vulnerability in this framework; whereas current life events, losses, relational conflicts or flare-ups in mental health symptoms act as acute triggers. This two-layered structure of risk demonstrates that clinical assessment must take into account both the long-term history and the current situation. Focusing on only one of these means seeing only half the picture.

Childhood trauma enters this picture at multiple points. Early traumatic experiences not only increase the likelihood of developing depression or post-traumatic stress disorder later in life; they also shape the individual's capacity to relate to pain, regulate their emotions and trust others. Thus, trauma functions both as a distant risk factor and as a developmental process that lays the psychological groundwork for suicidal behaviour (Cicchetti and Toth, 2005). The following sections address first the quantitative dimension of this link, and then the mediating mechanisms.

Figure 1. An integrated biopsychosocial model from childhood trauma to suicidal behaviour

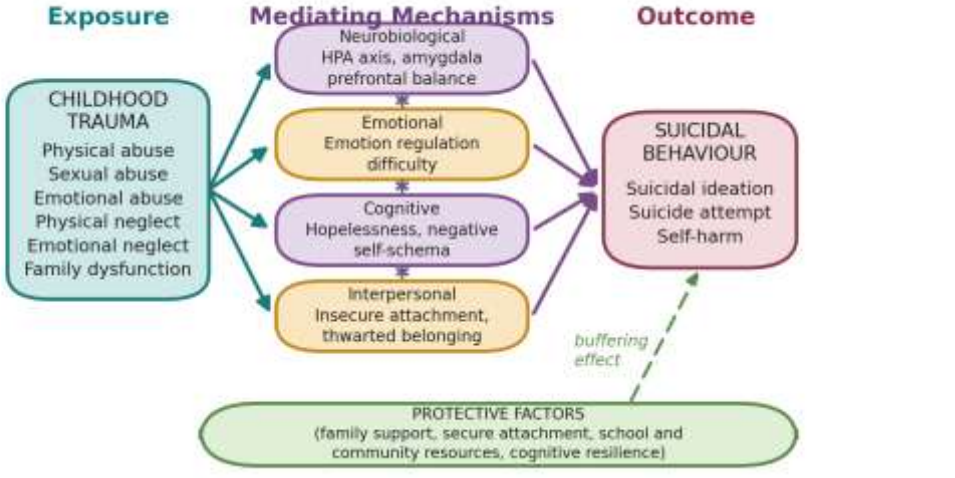

Figure 1. An integrated biopsychosocial model summarising the pathway from childhood trauma to suicidal behaviour. Exposure is linked to the outcome via four clusters of mediating mechanisms; protective factors act as regulators that weaken this pathway.

3.2. Adverse Childhood Experiences and Suicide Risk: A Dose-Dependent Relationship

The concept of adverse childhood experiences refers to the sum of experiences such as abuse (physical, sexual, emotional), neglect (physical, emotional) and family dysfunction (parental mental illness, substance use, domestic violence, loss of a parent) experienced during childhood. The most striking feature of these experiences is their tendency to cluster; a child who has experienced one type

of adverse experience is highly likely to have experienced others as well. This clustering leads to a picture in which it is not individual events but the cumulative burden that matters.

The prevalence of these experiences is crucial for understanding the scale of the problem. In community-based samples, a significant proportion of adults report at least one adverse childhood experience; a not inconsiderable proportion report four or more such experiences. This prevalence positions childhood trauma not as a rare and exceptional occurrence, but as a reality affecting broad sections of society. When the strong association between suicide risk and these experiences is combined with their widespread nature, it becomes clear that the contribution of childhood trauma to the societal burden of suicide is by no means insignificant. Indeed, various studies indicate that a significant proportion of suicidal thoughts and attempts can be attributed to adverse childhood experiences at the population level (Afifi et al., 2008).

The evidence consistently shows that this accumulation is associated with suicide risk in a dose-dependent manner. Studies pooling data from numerous countries have shown that as the number of adverse experiences increases, the rate of suicidal ideation and attempts rises markedly; the likelihood of a lifetime suicide attempt among individuals reporting four or more experiences is many times higher than among those reporting none (Hughes et al., 2017). In a national longitudinal study of secondary school pupils in the United States, it was reported that the link between four or more adverse life events and suicide attempts and serious suicidal ideation was among the strongest associations identified (Centres for Disease Control and Prevention, 2024). This suggests that risk operates not on a threshold basis, but according to a cumulative logic.

A consistent pattern also emerges when the types of abuse are examined. A comprehensive meta-analysis by Angelakis, Gillespie and Panagioti, covering more than 261,000 adults, demonstrated that different types of abuse increase the likelihood of a suicide attempt in adulthood by approximately two to three times; complex abuse, where multiple types of abuse co-occur, increases the risk by nearly five times (Angelakis et al., 2019). A subsequent meta-analysis focusing on young people also confirmed this association and revealed that sexual abuse, in particular, is strongly linked to suicide attempts at an early age (Angelakis et al., 2020). Another recent meta-analysis reported that exposure to adverse life events in individuals with mood disorders approximately doubles the risk of suicidal behaviour (European Psychiatry, 2025). These findings are summarised in Table 1 and Figure 3.

Underlying these quantitative patterns is the logic that different types of trauma affect different developmental processes. A conceptual distinction frames adverse experiences along two fundamental dimensions: threat (experiences involving direct harm, such as abuse or witnessing violence) and deprivation (experiences where expected input is absent, such as neglect or a lack of cognitive and emotional stimulation). It has been proposed that these two dimensions affect brain development in different ways; threat significantly shapes emotional reactivity and danger-processing circuits, whilst deprivation distinctly shapes cognitive and language-based processes (McLaughlin et al., 2014). This distinction explains why grouping all types of trauma into a single category is inadequate and why interventions must be tailored to the type of experience. The fact that sexual abuse increases the risk of suicide more markedly during specific developmental periods also highlights the importance of the interaction between timing and type.

Table 1. Key meta-analytic evidence on the relationship between childhood abuse and adverse life events and suicidal behaviour.

Source and sample	Type of exposure	Result	Effect (OR; 95% CI)
Angelakis et al. (2019); 68 studies, n = 261,660 adults	Sexual abuse	Suicide attempt	**3.17 (2.76 to 3.64)**
Angelakis et al. (2019)	Physical abuse	Suicide attempt	**2.52 (2.09 to 3.04)**
Angelakis et al. (2019)	Emotional abuse	Suicide attempt	**2.49 (1.64 to 3.77)**
Angelakis et al. (2019)	Complex (multiple) abuse	Suicide attempt	**5.18 (2.52 to 10.63)**
Angelakis et al. (2020); 79 studies, n = 337,185 young people	Sexual abuse	Suicide attempt (adolescence)	**Significant increase**
Meta-analysis (European Psychiatry, 2025); sample with mood disorders	Any adverse life event	Suicidal behaviour	**1.98 (1.74 to 2.26)**
Hughes et al. (2017); multinational pool	Four or more adverse life events	Suicide attempt (dose-dependent)	**Marked, multi-fold increase**

Note. OR: *odds ratio; CI: confidence interval. Values are taken from the relevant primary sources.*

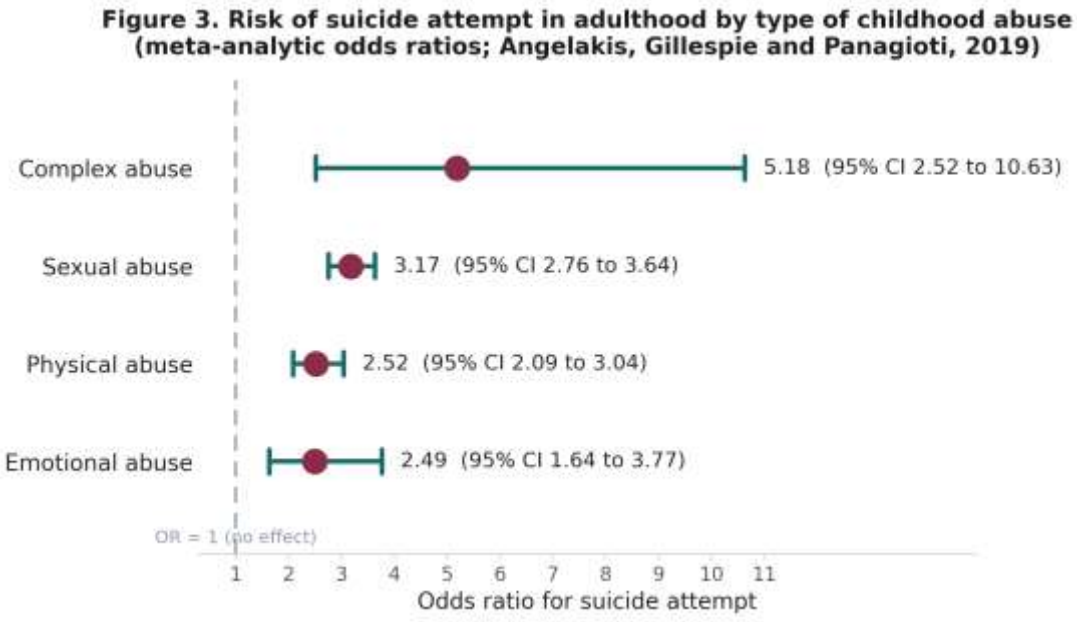

Figure 3. Meta-analytic odds ratios and 95% confidence intervals for suicide attempts in adulthood by type of childhood abuse. Complex abuse carries the highest risk (Angelakis, Gillespie and Panagioti, 2019).

3.3. Neurobiological Mechanisms

To understand the pathway by which childhood trauma leads to suicidal behaviour, it is necessary to examine how traumatic experiences are imprinted on the developing brain. Repeated stress in early life primarily disrupts the functioning of the hypothalamic–pituitary–adrenal axis. Chronic cortisol release and persistent allostatic load re-tune the stress response system in the long term; this leads to hyper-reactivity in some individuals and a blunted response to stress in others (Teicher and Samson, 2016). This regulatory shift has been consistently reported as underpinning the neurobiological basis of mood disorders and suicidal behaviour in adulthood.

Structural and functional imaging studies show that childhood trauma leaves distinct traces in fronto-limbic circuits. Threat-based early experiences are associated with excessive activation of the amygdala, which signals danger; conversely, the medial prefrontal cortex, which modulates emotional responses in a top-down manner, is unable to sufficiently suppress this activity (McLaughlin et al., 2014). It has been shown that prefrontal control, which regulates amygdala activity in healthy individuals, is markedly weakened in those who have experienced childhood trauma (Kessler et al., 2020). This imbalance leads to a rapid surge in intense emotions that are difficult to subdue, making the individual more vulnerable during times of crisis.

To understand why these effects vary between individuals, one must examine the interaction between environment and genetic predisposition. Part of the reason why individuals exposed to the same traumatic experience exhibit different outcomes is attributed to genetic differences that regulate the stress response and neurotransmitter systems. Furthermore, evidence that early stress can permanently alter gene expression (epigenetic regulation) is striking in demonstrating how the environment is ‘written’ into biology; whilst a traumatic experience does not alter the sequence of genes, it can reprogram which genes are active and to what extent. This perspective transcends the nature-versus-nurture dichotomy, revealing that the biological and psychological effects of childhood trauma are inextricably intertwined. This integrated understanding highlights both the complexity of the risk and the existence of multiple entry points for intervention.

Disruption of the stress axis affects not only emotional reactivity but also the structural development of the brain. It has been reported that persistently high cortisol levels are associated with a reduction in the volume of the hippocampus, which plays a role in memory and context processing; whilst the medial prefrontal cortex, which is central to emotional regulation, is found to be thinner and less functional in individuals who have experienced early adversity (Teicher and Samson, 2016). As the maturation of the prefrontal cortex continues until the end of adolescence, this region is particularly vulnerable to traumatic experiences throughout childhood and adolescence. This developmental delay may weaken impulse control and decision-making processes, thereby increasing the likelihood of impulsive and lethal behaviour during moments of crisis. Thus, neurobiological traces contribute to both the formation of suicidal thoughts and the transition from thought to action.

The clinical significance of these neurobiological changes lies in their direct link to the capacity for emotional regulation. When the disrupted balance between the amygdala and the prefrontal cortex is combined with changes in mood-regulating systems such as serotonin and dopamine, it results in prolonged elevated negative emotions and reduced psychological resilience. Thus, early trauma shapes not only what a person feels, but also what they are able to do with those feelings. Figure 2 summarises this step-by-step process as a chain extending from the stress axis to suicidal vulnerability.

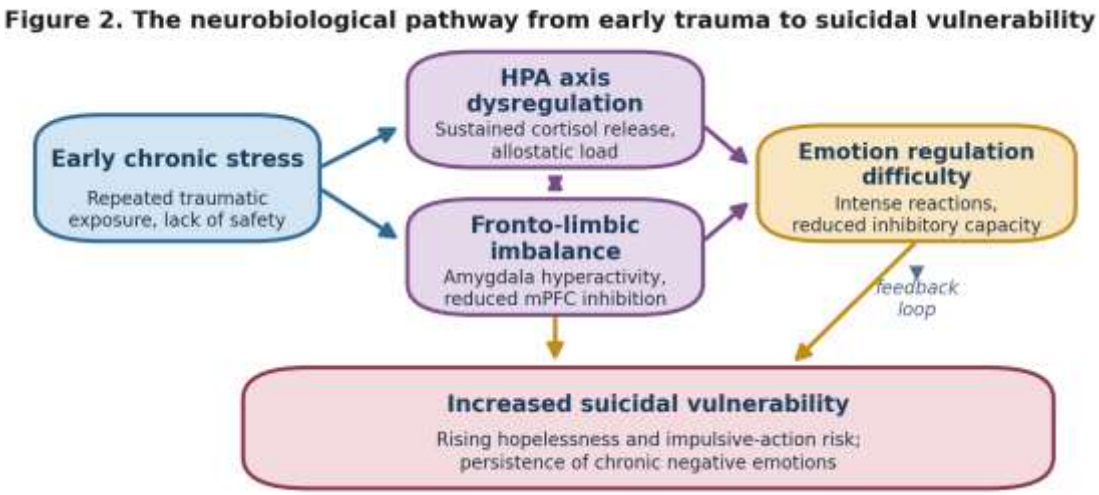

Figure 2. The neurobiological pathway from early trauma to suicidal vulnerability. Chronic stress is linked to difficulties in emotion regulation via HPA axis dysregulation and fronto-limbic imbalance, which in turn leads to an increased risk.

3.4. Difficulties with Emotional Regulation: A Central Mediator

Emotional regulation is an individual's capacity to recognise, accept, express appropriately and, where necessary, soothe intense and negative emotions. Childhood trauma disrupts the development of this capacity in many ways. Children growing up in a traumatic environment are often deprived of a consistent caregiver with whom they can safely share their emotions; as a result, they learn either to suppress their emotions or to express them in an uncontrolled manner. This early pattern persists into adulthood, making it difficult to cope with intense emotions (Gruhn and Compas, 2020).

Meta-analytic evidence consistently demonstrates the link between childhood trauma and difficulties with emotional regulation. It has been shown that traumatised children exhibit increased emotional reactivity and weakened regulation strategies (Lavi et al., 2019). More importantly, numerous studies report that difficulties with emotional regulation partially mediate the relationship between childhood trauma and suicidal ideation; in other words, part of the effect of trauma on suicidal ideation is mediated through impaired emotional regulation capacity. A structural equation modelling study conducted among inpatients diagnosed with depression has clearly demonstrated this mediating pattern.

The specific forms in which difficulties with emotion regulation manifest are also significant. Individuals who have experienced traumatic events often turn to maladaptive strategies such as suppressing emotions, ruminating on them in a cyclical manner, and mentally distancing themselves from distressing situations; conversely, they make less use of adaptive strategies such as reappraisal and problem-solving (Gruhn and Compas, 2020). Whilst these strategic choices may provide short-term relief from negative emotions, they reinforce them in the long term. In particular, it has been shown that suppression and rumination mediate the link between emotional abuse and suicidal ideation. This detail highlights the need for interventions to aim not only at reducing emotions but also at transforming the individual's repertoire of emotional regulation strategies. A cross-sectional study conducted on a Turkish sample also presents findings consistent with this picture; it reports that childhood emotional abuse and neglect are negatively associated with psychological well-being and that cognitive emotion regulation plays a decisive role in this relationship (Yıldırımer, 2024).

This finding has significant clinical value. A prospective follow-up study with adolescents revealed that the link between threatening early experiences and later suicidal ideation and self-harm behaviour is mediated by difficulties in accessing emotion regulation strategies. Such findings suggest that interventions aimed at strengthening emotional regulation capacity could serve as a direct target for reducing suicide risk in young people who have experienced trauma. In this respect, emotional regulation is one of the mechanisms within the pathways linking trauma to suicidal behaviour that is both most consistently demonstrated and most amenable to change.

3.5. The Interpersonal Theory of Hopelessness and Suicide

Hopelessness is the transformation of negative expectations about the future into a persistent pattern and is recognised as one of the strongest cognitive predictors in suicide research. Beck and colleagues' classic longitudinal study demonstrated that hopelessness predicts suicide in the long term; the theory of hopelessness, meanwhile, provides a framework for understanding how this emotion develops. According to this theory, attributing negative events to internal, stable and general causes reinforces a person's sense of hopelessness and helplessness (Abramson et al., 1989). Repeated trauma experienced in childhood provides fertile ground for

precisely this type of explanation; for the child often attributes pain that they cannot control or make sense of to their own worthlessness.

Beyond despair, at the very core of the suicidal process often lies unbearable inner pain. This pain is not merely sadness; it is an intense psychological agony arising from a combination of feelings of shame, guilt, anger and worthlessness. From this perspective, suicide is understood less as a desire to die and more as a desire to escape this pain. Childhood trauma fuels both the source of this pain and the weakness in one's capacity to manage it; when a traumatised individual is confronted with intense pain, they are often deprived of the internal and relational resources needed to soothe it. Consequently, one aim of therapeutic intervention is to rebuild the individual's capacity to engage with this pain and make it bearable; not to deny the existence of the pain, but to give it a form that can be endured.

An individual traumatised in childhood develops negative core beliefs about themselves and the world; they come to view themselves as worthless, the world as dangerous, and the future as hopeless. These schemas lead to the negative interpretation of events encountered later in life, creating a self-fulfilling cycle. Hopelessness thus ceases to be a transient emotion and transforms into a perspective embedded within the personality structure, forming the psychodynamic underpinnings of suicidal ideation. In this process, hopelessness functions as the cognitive residue of the trauma.

A contemporary framework that explains the role of hopelessness in the suicidal process in greater detail is the integrated motivational-volitional model. According to this model, suicidal ideation arises when feelings of defeat and shame transform into a sense of entrapment from which no escape route is visible (O'Connor and Kirtley, 2018). Childhood trauma provides an early foundation that nurtures precisely these two emotions; repeated maltreatment reinforces in the child both a sense of defeat and a feeling of being unable to escape the situation. When the sense of entrapment combines with hopelessness, thoughts become more likely to turn into action. This framework is clinically valuable in that it treats hopelessness not as a static trait, but as a process triggered by specific conditions and one that can be interrupted through intervention.

The interpersonal theory of suicide adds a relational dimension to this cognitive framework. According to Van Orden et al., the most dangerous suicidal intent arises from the co-occurrence of two conditions: thwarted belonging (the individual feeling isolated, deprived of bonds of love and mutual care) and perceived burden (the belief that one's existence is a burden to others), compounded by a sense of hopelessness that these circumstances will never change (Van Orden et al., 2010; Joiner, 2005). Childhood trauma sows the seeds of both these constructs at an early stage; neglect and rejection foster a sense of belonging, whilst abuse and blame fuel the perception of being a burden. The theory further posits that a lethal attempt requires resilience acquired in the face of pain and fear; repeated traumatic experiences may also be the source of this resilience. Thus, trauma forms a common root that fuels both the desire for suicide and the capacity to act upon it.

3.6. Attachment Patterns

Attachment theory posits that the emotional bond a child forms with a caregiver in early life develops into an internal working model that lasts a lifetime (Bowlby, 1988). Secure attachment provides the child with both a sense of security to cope with stress and a relational framework within which to learn to regulate their emotions. In contrast, neglectful or inconsistent care paves the way for the development of insecure attachment patterns. In avoidant attachment, the individual learns to conceal their emotions and avoid intimacy, whilst in anxious attachment, the fear of abandonment and an excessive need for reassurance come to the fore. Current meta-analytic evidence suggests that insecure attachment patterns are remote risk factors associated with suicidal behaviour. It has been reported that anxious, avoidant and fearful attachment styles are associated with suicidal ideation and attempts, with effect sizes ranging from small to moderate; correlation coefficients were found to be in the range of approximately 0.16 to 0.26 (Maciel et al., 2026). It has been observed that secure attachment acts as a protective factor against suicide attempts, whilst insecure patterns increase the risk. This relationship suggests that attachment operates both directly and through mediating processes such as emotion regulation and help-seeking behaviour.

The developmental logic of attachment explains why early relationships are so decisive. Through repeated interactions with their caregiver, the infant develops an internal model of themselves and others; this model incorporates early responses to the questions 'Am I worthy?' and 'Are others trustworthy?'. In a distressing care environment, these responses are encoded negatively, and the child perceives themselves as unworthy of love and the world as dangerous. Once this model is established, new relationships are interpreted in a way that confirms the same pattern; thus, mistrust perpetuates itself. In particular, the disorganised attachment style arises from the contradictory experience of the caregiver being both a source of fear and a source of security at the same time, and is strongly associated with later-life psychological vulnerability.

The contribution of attachment to suicide risk follows a logic consistent with interpersonal theory. Avoidantly attached individuals tend to withdraw into themselves during crises because they struggle to express their emotional difficulties and seek help; this, in turn, deepens their feelings of loneliness and hopelessness. Anxious-attached individuals, on the other hand, may be driven to feelings of worthlessness in the face of unmet expectations of closeness, due to intense emotional fluctuations and a fear of abandonment. Both patterns bear the mark of a failure to establish secure relationships in childhood and leave the individual more vulnerable to stress and trauma.

3.7. Protective Factors and Resilience

The negative effects of childhood trauma are not inevitable; alongside risk factors, there are protective factors and sources of resilience that counterbalance them. These resources are key to explaining why two individuals who have experienced the same traumatic event may follow different trajectories. A safe and consistent family environment cushions the impact of trauma by ensuring the child's emotional needs are met; relationships characterised by both love and predictable boundaries strengthen the child's self-confidence and coping skills.

Resources outside the family are just as important. School is not merely a place of learning, but a developmental environment offering the opportunity to form a healthy bond with a trusted adult; accessible counselling services and teachers with trauma awareness play a decisive role in the early identification of at-risk children. Community-based programmes and social support networks create a protective foundation by reducing feelings of loneliness and hopelessness. Cognitive resilience, meanwhile, mobilises an individual's internal resources through the ability to recognise and reframe negative thought patterns, strengthen a sense of self-efficacy, and manage stress. The distribution of these factors is summarised by level in Table 2.

Protective resources are not limited to adult relationships. Peer bonds, particularly during adolescence, serve as an important buffer that strengthens the sense of belonging and reduces loneliness; positive peer relationships can be regarded as an antidote to a lack of belonging. Existential resources, such as attributing meaning and purpose to life, harbouring hope for the future and feeling part of a community, also create a protective balance against hopelessness. It has been reported that spiritual and cultural ties fulfil a protective function against suicide in certain contexts. A common feature of these resources is that they contribute to an individual's experience of themselves as valuable, connected and having a place in the future; this is precisely the area that trauma damages.

How resilience is understood directly influences the rationale for intervention. If resilience is viewed as a fixed trait present in some individuals, the possibilities for developing it remain limited. By contrast, the current understanding treats resilience not as an outcome but as a process; it is viewed as a dynamic pattern arising from the interaction between the individual and their environment, one that can change over time. This perspective is encouraging, as it demonstrates that resilience can be nurtured and built up. The presence of just one reliable adult in a child's life can significantly cushion the impact of trauma; this finding serves as a reminder that protective factors often consist not of grand gestures, but of everyday and accessible resources. The aim of intervention is to multiply and strengthen these accessible resources.

Table 2. Risk and protective factors according to ecological levels in the context of childhood trauma.

Level	Risk factors	Protective factors
Individual	Low self-esteem, hopelessness, difficulty regulating emotions, impulsivity, co-occurring depression and anxiety	Cognitive resilience, self-efficacy, flexible coping strategies, ability to recognise and express emotions
Family	Domestic violence, abuse and neglect, loss of a parent, parental mental illness, inconsistent care, insecure attachment	Secure attachment, consistent and warm parenting, open communication, the presence of at least one supportive adult
Social	Poverty, exclusion and loneliness at school, inadequate support systems, stigmatisation	Accessible school counselling, trauma-informed teachers, community-based programmes, strong social networks

3.8. Clinical Interventions

Addressing the risk of suicide associated with childhood trauma requires a multi-component and multi-disciplinary approach. The first step is a comprehensive assessment and risk management. During the clinical consultation, the individual's history of trauma, current psychological symptoms and the nature of suicidal ideation (intensity, level of planning, past attempts) must be systematically addressed; the presence of adverse life experiences, the severity of feelings of helplessness and being a burden, and the social support system must be assessed. Ensuring a safe environment and having rapid intervention protocols in place for crisis situations are fundamental elements of the process.

Among psychotherapeutic approaches, dialectical behaviour therapy, which directly targets emotion regulation, has a strong evidence base. A meta-analysis pooling eighteen controlled studies reported that this approach significantly reduced self-harm and the frequency of referrals to psychiatric crisis services (effect size approximately 0.32 in the direction of a reduction); however, its pooled effect on suicidal ideation did not reach statistical significance (DeCou et al., 2019). The version adapted for adolescents has also reduced self-harm and suicidal ideation with effect sizes ranging from small to moderate (Kothgassner et al., 2021). This pattern suggests that behavioural outcomes may change more rapidly than thoughts.

Short-term interventions targeting direct suicide risk also form a significant part of the evidence base. Safety planning is a collaborative approach that pre-establishes warning signs, coping strategies and support resources an individual can turn to during

a crisis; such short-term interventions are reported to be valuable in reducing risk during the post-attempt period. Restricting access to lethal means is one of the most effective components of evidence-based prevention strategies, given that crises are often sudden and transient. These approaches do not replace long-term psychotherapy; however, by serving a protective function during critical windows when risk is elevated, they buy time for more comprehensive treatment to be initiated.

Trauma-focused cognitive behavioural therapies and approaches such as eye movement desensitisation and reprocessing aim to reprocess distressing memories in a safe environment and reduce emotional distress. Family and systemic interventions address the relational context in which the child is developing, contributing to the re-establishment of secure attachment environments; parental education, the strengthening of intra-family communication and the provision of environmental safety are considered within this framework. Pharmacological treatment, however, should not be used in isolation but integrated with psychotherapy; it should be planned using low doses and close monitoring, particularly taking into account the developmental characteristics of children and adolescents. The common thread running through all these interventions is that they address the legacy of trauma not merely at the level of symptoms, but at the level of the psychological mechanisms underpinning them.

The success of these interventions depends not so much on individual techniques as on their integration within a consistent continuum of care. When the care of a person at risk is distributed across different specialist areas, vulnerability increases at transition points (such as the move from inpatient to outpatient care, from adolescent to adult services, or from one institution to another). Ensuring that support is not interrupted during these transition periods serves a protective function at the very moments when risk is at its highest. Therefore, an effective system does not merely provide the right interventions; it also incorporates a structure that bridges the gaps between these interventions, maintains continuity of care, and protects the individual from falling through the cracks in the system. Trauma-informed care is a holistic approach that aims precisely to establish this continuity and foundation of trust.

4. DİSCUSSİON

The evidence brought together in this review demonstrates that the link between childhood trauma and suicidal behaviour is now an undisputed finding. The fact that results from different countries, different samples and different methodologies point so consistently in the same direction provides strong evidence of the robustness of this link. Meta-analyses encompassing hundreds of thousands of participants reveal that every type of abuse increases the likelihood of suicide attempts in adulthood by two to three times, whilst complex trauma involving multiple types of abuse increases this likelihood by nearly five times (Angelakis et al., 2019; Angelakis et al., 2020). Given this picture, the question that must now be asked is not whether the relationship exists, but rather through which mechanisms it is established and how it can be disrupted.

One of the most striking patterns emerging from the findings is the dose-dependent nature of the risk. The fact that risk rises markedly as the number of adverse experiences increases suggests that childhood trauma operates not on a threshold basis, but according to a cumulative logic (Hughes et al., 2017; Centres for Disease Control and Prevention, 2024). This cumulative nature is significant in two respects. From a theoretical perspective, it demonstrates that models focusing on a single traumatic event are inadequate; instead, approaches that assess the cumulative burden accumulated throughout a person's life story are necessary. From a practical perspective, it indicates that the number of adverse experiences a child has been exposed to can be used as a strong risk indicator in its own right during clinical assessment.

When examining the mediating mechanisms, it becomes apparent that the neurobiological, emotional, cognitive and interpersonal pathways—which are studied separately—are not, in fact, independent of one another, but form an intertwined network. Disruptions in the hypothalamic–pituitary–adrenal axis and an imbalance between the amygdala and the prefrontal cortex are not merely abstract biological changes; they lie at the very foundation of the capacity for emotional regulation (Teicher and Samson, 2016; Kessler et al., 2020). An individual who struggles to regulate their emotions becomes more susceptible to schemas of hopelessness and also finds it difficult to form secure attachments in their relationships. Thus, the neurobiological basis functions as a common source that underpins emotional, cognitive and interpersonal mechanisms. This integrated structure is the central proposition of the model in Figure 1: trauma is linked to suicidal behaviour not through a single pathway, but through numerous mutually reinforcing pathways.

Among these mechanisms, difficulty with emotion regulation occupies a special position. The fact that it is both one of the most consistent consequences of trauma and has been shown to mediate the pathway to suicidal ideation makes it central from a theoretical perspective (Lavi et al., 2019; Gruhn and Compas, 2020). More importantly, emotion regulation is a modifiable target. Whilst neurobiological predispositions or past traumatic events cannot be undone, emotional regulation skills can be strengthened through therapeutic interventions. The effectiveness of dialectical behaviour therapy in reducing self-harm may stem precisely from its focus on these skills (DeCou et al., 2019). For this reason, emotion regulation is the most promising link in the chain between trauma and suicide, both theoretically and clinically.

It is also worth noting how these mechanisms trigger one another throughout the course of a person's life. Impaired emotional regulation capacity in childhood can lead to difficulties in peer relationships during adolescence; these difficulties can lead to experiences of loneliness and rejection; and these, in turn, can lead to the reinforcement of hopelessness and negative self-schemas.

Thus, an early vulnerability creates a chain that grows and progresses over time. This process, known as developmental cascading, explains why early intervention is so valuable; intervention at an early link in the chain can alleviate the burden on all subsequent links. The same logic also demonstrates why delayed intervention is more challenging: each accumulated layer requires to be addressed separately. Consequently, the timing of intervention is just as crucial as the type of intervention itself.

Another important aspect of the findings is the significance of developmental timing. It is known that the brain's emotional and cognitive circuits are more flexible during certain periods, and are therefore more susceptible to both damage and recovery. Early childhood and adolescence are among the most critical of these sensitive windows. This has a two-fold implication: whilst the impact of trauma experienced during these periods may be more profound, the restorative power of interventions carried out during these periods is also greater. This symmetry explains why prevention and early intervention efforts are so valuable; the same plasticity that inflicts the wound also enables it to heal.

The consistency of the findings should not overshadow the diversity of individual trajectories. The fact that the same traumatic experience can lead to different outcomes in different individuals (multifactorial) and that different patterns of experience can converge on a similar outcome (convergent) are fundamental principles of developmental psychopathology. These two principles serve as a reminder of the probabilistic nature of risk: childhood trauma significantly increases the risk, but does not definitively determine any individual's trajectory. This distinction is also clinically important; it prevents both the assumption that every individual who has experienced trauma is at risk of suicide and the failure to recognise the risk in individuals without such a history. Assessment should be broadened from a probability estimate based on history to a holistic judgement that also takes current circumstances into account.

The presence of protective factors ensures that this picture is not interpreted in a deterministic manner. The fact that individuals bearing the same traumatic burden may follow different trajectories serves as a reminder that risk is probabilistic, not absolute. A secure family bond, a supportive teacher or a strong social network can significantly cushion the impact of trauma. This conveys a powerful message from both clinical and societal perspectives: the aim of intervention is not merely to reduce risk factors, but also to increase and strengthen protective resources. Resilience is not a fixed personality trait, but a dynamic process nourished by relationships and environments; it is therefore a resource that can be built up.

However, the methodological limitations of the reported evidence must not be overlooked. Much of the data on childhood trauma relies on retrospective reports from adults; this creates a fertile ground for recall bias and for current mental state to colour perceptions of the past. Furthermore, a significant proportion of the studies employ a cross-sectional design; this design does not allow for a definitive determination of the direction of the relationship or causality. The high heterogeneity reported in meta-analyses reflects differences in samples, measurement tools and definitions of outcomes, and limits the generalisability of the findings. The relatively limited reporting of data on suicide and self-harm behaviour implies that certain aspects of the picture remain incomplete. Finally, as this review itself is based on a narrative design, the selected sources and interpretations may reflect a particular perspective; the findings should be evaluated within this framework.

The question of how much of the effect of trauma is mediated through psychiatric comorbidities and how much is direct holds both theoretical and practical significance. The evidence suggests that mental disorders account for a significant part of this relationship but do not explain it entirely; the link between trauma and suicide risk persists even after controlling for depression or post-traumatic stress disorder (Afifi et al., 2008). This leads to two complementary conclusions. Firstly, attempting to fit every individual who has experienced trauma into a diagnostic framework may overlook part of the risk; secondly, treating only the comorbid disorder may prove insufficient unless it directly addresses the direct consequences of trauma (difficulties with emotion regulation, schemas of hopelessness, insecure attachment). Therefore, an effective intervention must directly target the trauma itself whilst treating the diagnostic presentation.

Another noteworthy point is that behavioural outcomes can change more rapidly than thoughts. Whilst dialectical behaviour therapy significantly reduces self-harm, its pooled effect on suicidal ideation remains more limited (DeCou et al., 2019); this suggests that interventions primarily save lives by preventing action, whilst the transformation of thoughts requires a longer and distinct process. This distinction necessitates the setting of layered clinical goals: whilst the immediate priority is to ensure safety and behavioural control, the medium- and long-term goal is the restructuring of hopelessness and negative self-schemas. Layering the mechanisms underlying trauma in this way allows both for realistic expectations and the correct sequencing of interventions.

Another dimension to be considered when interpreting the evidence is the issue of measurement and cultural context. Adverse childhood experiences are predominantly measured on the basis of retrospective self-reports; this leaves the door open to recall bias and the reframing of past experiences by current mental state. The fact that prospective and record-based assessments do not always align with retrospective reports suggests that how exposure is defined shapes the findings. Furthermore, the definition of abuse and neglect, threshold values and social visibility vary from culture to culture; the fact that a practice considered normal in one context may be regarded as harmful in another complicates the interpretation of comparative studies. In contexts such as Turkey, where family structures, social support and patterns of help-seeking take on distinctive forms, international data should be supported by local validity studies rather than simply being transposed directly. Consequently, the development of culturally sensitive

measurement tools and their testing on local samples emerges as a priority requirement from both a research and a clinical perspective.

Despite these limitations, the body of evidence presents a consistent and clinically actionable picture. Childhood trauma is a distant yet powerful predictor of suicidal behaviour; this effect is mediated through neurobiological, emotional, cognitive and interpersonal mechanisms and is shaped by protective factors. This integrated understanding enables both a more accurate assessment of risk and the targeted delivery of interventions. The primary task facing the field is to disentangle these mechanisms through more robust designs and to test interventions against them.

5. CONCLUSİON AND FUTURE DİRECTİONS

Traumatic experiences in childhood are among the most consistently documented predictors of suicidal behaviour in adulthood. This review has demonstrated that this relationship is not merely a statistical association; rather, it is mediated through interacting mechanisms such as neurobiological dysregulation, difficulties with emotional regulation, schemas of hopelessness and insecure attachment patterns. The dose-dependent nature of the risk, the significance of developmental timing and the buffering power of protective factors are the cornerstones of this picture. All of this necessitates viewing childhood trauma as a lifelong process and targeting interventions at different points along this continuum.

From a clinical practice perspective, the first implication is the value of routinely screening for adverse childhood experiences with trauma-informed sensitivity. The number and type of adverse experiences an individual has endured provide a strong indicator for assessing suicide risk; when conducted within a non-stigmatising, reassuring relationship, this screening both identifies risk and strengthens the therapeutic bond. The second implication is that interventions should focus on modifiable mechanisms. Strengthening emotion regulation skills, restructuring schemas of hopelessness and repairing secure attachment experiences are the most concrete ways of reducing risk in individuals bearing the traces of trauma.

Several directions stand out for future research. Firstly, to overcome the limitations of retrospective reports, there is a need for prospective follow-up studies spanning from childhood to adulthood; such designs will shed more reliable light on both causality and sensitive developmental windows. Secondly, studies that simultaneously model mediating mechanisms and test the interaction of multiple pathways can reveal which mechanism is dominant under which conditions. Thirdly, combining biological indicators (stress axis function, neuroimaging findings and the interaction of genetic predispositions with the environment) with psychological measures may enable risk to be predicted earlier and more accurately. Fourthly, given the scarcity of studies conducted in low- and middle-income countries, there is a clear need for evidence generated across different cultures and socio-economic contexts.

In terms of prevention, the most promising area indicated by the evidence is early-intervention and school-based programmes. Early-intervention programmes that strengthen parenting skills, reduce domestic violence and support secure attachment have the potential to reduce risk from the outset by addressing the root causes of trauma. Schools adopting a trauma-informed approach; teachers recognising risk indicators; and the widespread provision of accessible psychological counselling services enable the early identification of children at risk. Testing the effectiveness of these programmes through controlled studies and scaling them up should be a priority for the field.

Given barriers to access, the development of scalable and low-cost interventions constitutes a separate priority. In contexts where specialists are in short supply, approaches such as digital support tools, brief interventions and task-sharing (structured support provided by non-specialist but trained individuals) hold the potential to broaden the scope of care. Such innovations must be carefully designed with regard to privacy, safety and ethics, and their effectiveness must be demonstrated through controlled studies. At the same time, awareness-raising initiatives that reduce stigma at a community level and make it easier to seek help are valuable as a means of reaching broad sections of the population that individual interventions cannot reach. Given that the majority of individuals who have experienced trauma never access professional support, expanding access is at least as important as the quality of the interventions themselves.

At the level of organising clinical services, multidisciplinary and integrated care models appear to be key. A structure in which psychiatrists, psychologists, social workers and educators work together; where risk assessments are continuously and dynamically updated; and where ready-made protocols are in place for crisis situations, can manage a level of complexity that no single specialist field can encompass. The integration of pharmacological treatment with psychotherapy requires a delicate balance, particularly in children and adolescents, where it must be conducted with developmental sensitivity and close monitoring. The continuity of care and the avoidance of interruptions in support during transitional periods (for example, the transition from adolescence to adulthood or from inpatient to community care) serves a protective function at critical moments when risk is heightened.

There are also concrete opportunities for progress in the field of assessment and risk prediction. It is now recognised that predicting suicide risk based on a single variable is difficult; given that risk arises from the interaction of numerous factors, future models will most likely be integrated frameworks that assess psychological, neurobiological and social indicators together. The widespread adoption of intensive longitudinal measurement methods (such as repeated brief assessments in daily life) makes it possible to observe how risk fluctuates over time and at which moments it rises to dangerous levels. This approach opens the door to a more

dynamic and individualised understanding of risk by combining the predisposing factors of childhood trauma with current triggers. The safe and ethical translation of such methods into clinical practice is one of the key tasks for the coming period.

At the policy level, childhood trauma must be recognised as a public health priority. Given that a large proportion of the global burden of suicide is concentrated in low- and middle-income countries (World Health Organisation, 2025), it is crucial to adapt prevention strategies to these contexts and prioritise low-cost, scalable interventions. Strengthening child protection systems, increasing socio-economic support for families, and embedding trauma-informed care within health, education and social care systems can make a difference at a societal level, going beyond individual interventions. These steps require addressing trauma not as an individual misfortune, but as a preventable societal problem.

Implementing all these recommendations is impossible without a well-trained workforce. Training professionals working in the fields of health, education and social services in trauma-informed care; and ensuring the widespread adoption of skills such as recognising risk indicators, communicating in a safe and non-stigmatising manner, and providing appropriate referrals, form the cornerstone of the system. Ensuring that a broad range of professionals – from teachers to GPs, and from A&E staff to school counsellors – recognise the link between childhood trauma and suicide risk prevents at-risk individuals from falling through the cracks. Ensuring that these training programmes are continuous, up-to-date and practice-oriented; and, at an organisational level, the adoption of a trauma-informed care culture, requires a structural transformation that goes beyond individual goodwill.

Consequently, the psychological effects of childhood trauma on suicidal behaviour constitute a lifelong and multi-layered process; however, this process is not irreversible. Understanding that risk is mediated through neurobiological, emotional, cognitive and interpersonal mechanisms demonstrates that each mechanism can become a target for intervention, and that protective resources introduced at an early stage can alter the trajectory. When early diagnosis, trauma-informed care, interventions aimed at emotion regulation and secure attachment, and prevention programmes at a societal level are combined, it is possible to prevent the wounds inflicted in childhood from becoming a lifelong fate. The real promise for the field lies in translating this knowledge into consistent, accessible and sustainable practices.

Sensitivity note

This text addresses sensitive topics such as suicide and childhood trauma within an academic and informative framework. It is recommended that anyone experiencing suicidal thoughts or concerned about a loved one should seek help from a mental health professional or contact local crisis helplines. In Turkey, the 112 Emergency Call Centre can be contacted in emergencies.

REFERENCES

1) Abramson, L. Y., Metalsky, G. I., & Alloy, L. B. (1989). Hopelessness depression: A theory-based subtype of depression. Psychological Review, 96(2), 358–372.
2) Afifi, T. O., Enns, M. W., Cox, B. J., Asmundson, G. J. G., Stein, M. B., & Sareen, J. (2008). Population attributable fractions of psychiatric disorders and suicide ideation and attempts associated with adverse childhood experiences. American Journal of Public Health, 98(5), 946–952.
3) Angelakis, I., Gillespie, E. L., & Panagioti, M. (2019). Childhood maltreatment and adult suicidality: A comprehensive systematic review with meta-analysis. Psychological Medicine, 49(7), 1057–1078.
4) Angelakis, I., Austin, J. L., & Gooding, P. (2020). Association of childhood maltreatment with suicide behaviours among young people: A systematic review and meta-analysis. JAMA Network Open, 3(8), e2012563.
5) Beck, A. T., Steer, R. A., Kovacs, M., & Garrison, B. (1985). Hopelessness and eventual suicide: A 10-year prospective study of patients hospitalised with suicidal ideation. American Journal of Psychiatry, 142(5), 559–563.
6) Bowlby, J. (1988). A secure base: Parent-child attachment and healthy human development. Basic Books.
7) Centres for Disease Control and Prevention. (2024). Adverse childhood experiences and health conditions and risk behaviours among high school students: Youth Risk Behaviour Survey, United States, 2023. MMWR Supplements, 73(4).
8) Cicchetti, D., & Toth, S. L. (2005). Child maltreatment. Annual Review of Clinical Psychology, 1, 409–438.
9) DeCou, C. R., Comtois, K. A., & Landes, S. J. (2019). Dialectical behaviour therapy is effective for the treatment of suicidal behaviour: A meta-analysis. *Behaviour Therapy*, 50(1), 60–72.
10) Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. American Journal of Preventive Medicine, 14(4), 245–258.
11) Gruhn, M. A., & Compas, B. E. (2020). Effects of maltreatment on coping and emotion regulation in childhood and adolescence: A meta-analytic review. Child Abuse & Neglect, 103, 104446.
12) Hughes, K., Bellis, M. A., Hardcastle, K. A., Sethi, D., Butchart, A., Mikton, C., Jones, L., & Dunne, M. P. (2017). The effect of multiple adverse childhood experiences on health: A systematic review and meta-analysis. The Lancet Public Health, 2(8), e356–e366.
13) Joiner, T. E. (2005). Why people die by suicide. Harvard University Press.

14) Kessler, R., Schmitt, S., Sauder, T., Stein, F., Yüksel, D., Grotegerd, D., Dannlowski, U., Hahn, T., Kircher, T., & Jansen, A. (2020). Long-term neuroanatomical consequences of childhood maltreatment: Reduced amygdala inhibition by the medial prefrontal cortex. Frontiers in Systems Neuroscience, 14, 28.
15) Kothgassner, O. D., Goreis, A., Robinson, K., Huscsava, M. M., Schmahl, C., & Plener, P. L. (2021). Efficacy of dialectical behaviour therapy for adolescent self-harm and suicidal ideation: A systematic review and meta-analysis. Psychological Medicine, 51(7), 1057–1067.
16) Lavi, I., Katz, L. F., Ozer, E. J., & Gross, J. J. (2019). Emotion reactivity and regulation in maltreated children: A meta-analysis. Child Development, 90(5), 1503–1524.
17) Maciel, M. R., Zylberstajn, C., Mello, M. F., et al. (2026). Adult insecure attachment styles and suicidality: A meta-analysis. Death Studies, 50(2), 187–198.
18) McLaughlin, K. A., Sheridan, M. A., & Lambert, H. K. (2014). Childhood adversity and neural development: Deprivation and threat as distinct dimensions of early experience. Neuroscience & Biobehavioural Reviews, 47, 578–591.
19) O'Connor, R. C., & Kirtley, O. J. (2018). The integrated motivational-volitional model of suicidal behaviour. Philosophical Transactions of the Royal Society B, 373(1754), 20170268.
20) Teicher, M. H., & Samson, J. A. (2016). Annual research review: Enduring neurobiological effects of childhood abuse and neglect. Journal of Child Psychology and Psychiatry, 57(3), 241–266.
21) Turecki, G., & Brent, D. A. (2016). Suicide and suicidal behaviour. The Lancet, 387(10024), 1227–1239.
22) Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E. (2010). The interpersonal theory of suicide. Psychological Review, 117(2), 575–600.
23) World Health Organisation. (2025). Suicide (Fact sheet). Geneva: World Health Organisation.
24) Yıldırımer, K. Ş. (2024). The relationship between childhood traumas and individuals' psychological well-being: The role of cognitive emotion regulation. Turkish Journal of Psychology and Psychiatry, 1(1).