

Biopsychosocial Correlates of Parental Alienation: Cortisol, Attachment, and Observational Data

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Abstract: *Parental alienation (PA) is a complicated and widely debated family situation in which a child unfairly rejects one parent because of the psychological manipulation carried out by the other. Although it has a widespread effect on a child's development and on their long-term mental health, PA has in the past been evaluated using subjective self-report methods, which has restricted its usefulness in a clinical or legal context. The present paper introduces and looks at a comprehensive biopsychosocial model of PA, incorporating three areas of evidence that have converged: biological indicators of chronic stress, psychological frameworks based on attachment theory, and structured observational data on behavior. On a biological level, continuous exposure to parental alienating behaviors (PABs) leads to serious dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis, as shown by heightened cortisol levels, systemic neuroinflammation, oxidative stress, and permanent epigenetic changes. Psychologically, PABs systematically destroy the conditions needed for a secure attachment between a child and a parent, leading to the development of insecure-avoidant or disorganized attachment styles, which make children more susceptible to depression, anxiety, post-traumatic stress disorder (PTSD), and difficulties in regulating their emotions. In the social realm, structured observational coding systems provide objective and reproducible criteria for telling the difference between children who are alienated and those who have been cut off from a parent because of real abuse or neglect. A chain mediation model is put forward in which PABs (in the social domain) undermine attachment security (in the psychological domain), which then causes chronic HPA axis dysregulation (in the biological domain), and as a result leads to serious mental health problems and the intergenerational transmission of relational trauma. The paper also considers the implications for clinical assessment, legal systems, and the development of specific interventions.*

Keywords: parental alienation, HPA axis, attachment theory, disorganized attachment, child psychopathology, intergenerational transmission.

INTRODUCTION

Parental alienation (PA) is a phenomenon that mainly occurs in the context of a high-conflict separation or divorce and is found in families of all cultures and social and economic backgrounds. It is generally described as a process by which a child comes to be cut off from one parent, the parent who is the object of the alienation, due to the psychological manipulation, coercion, and indoctrination carried out by the other parent, known as the alienating parent (Bernet & Greenhill, 2022). The child who has been alienated usually shows an irrational and unjustified rejection of the target parent, together with a total lack of ambivalence and a reflexive and steadfast loyalty to the alienating parent.

The extent of this problem is considerable. Conservative global estimates indicate that 11 to 15 percent of divorces involving children involve some form of PA (Kamyshnyi et al., 2025). In the United States alone, more than 22 million adults say that they have experienced PA, about 10 million of them having suffered severe alienation. A nationally representative survey of young adults in the United Kingdom showed that 98.3 percent had experienced at least one PAB during their childhood, with over half exposed to ten or more behaviors (Hine et al., 2026). Therefore, PA should not be regarded as a rare clinical anomaly but rather as a widespread public health issue.

Even though it is common, there is still controversy over the formal clinical and legal recognition of PA. Neither the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR) nor the eleventh revision of the International Classification of Diseases (ICD-11) classify PA as a separate disorder; rather, alienating behaviors are included within wider categories of problems in the parent-child relationship (Kamyshnyi et al., 2025). Those who criticize the PA concept claim that the current body of research is restricted by sampling biases and that the label can be used in custody cases to hide real abuse. On the other hand, the supporters assert that the increasing amount of empirical evidence covering qualitative, quantitative, and now biological studies, offers strong support for PA as a distinct and harmful type of psychological child abuse (Hine et al., 2026; Verhaar et al., 2022).

This debate shows how urgently it is necessary to adopt a methodologically sound and multimodal approach to assessing PA. The aim of the current paper is to show that a biopsychosocial framework involving biological stress biomarkers, psychological attachment theory, and structured behavioral observation provides the most thorough and justifiable model for understanding, diagnosing, and treating PA.

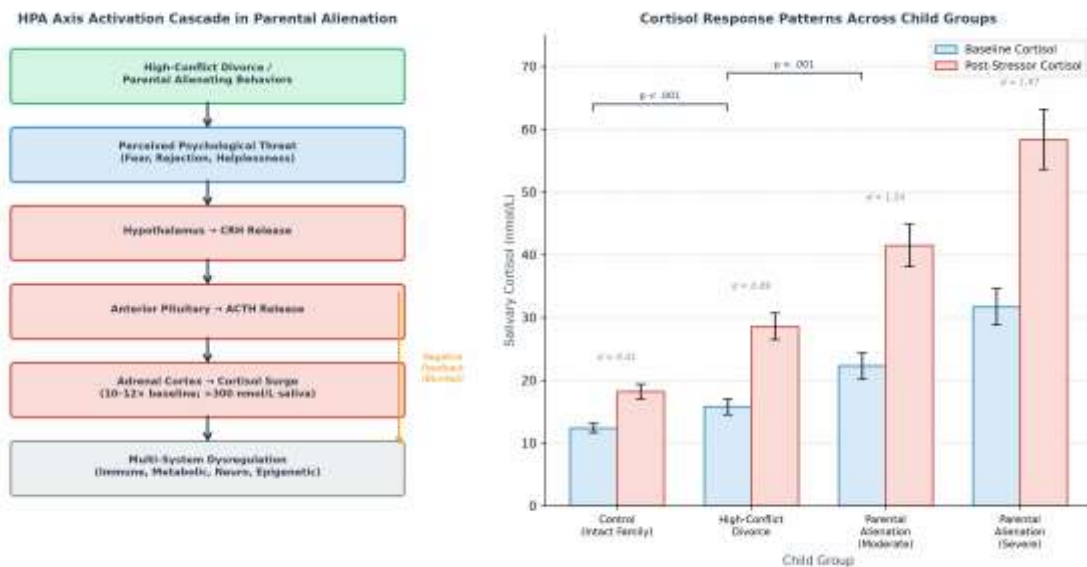
Biological Correlates: HPA Axis Dysregulation and Cortisol

The biological effects of parental alienation are a crucial yet historically little-examined aspect of the issue. The continuous psychosocial stress caused by a high-conflict divorce and the deliberate manipulation of a child's emotional life amounts to a serious adverse childhood experience (ACE), accompanied by well-documented biological consequences (Kamyshnyi et al., 2025; Melinder et al., 2023).

The HPA Axis as the Central Stress Transduction System

The hypothalamic-pituitary-adrenal (HPA) axis is the main neuroendocrine system involved in coordinating the body's reaction to perceived threats. If a child comes across a psychological threat, for example, through fear, difficulties relating to loyalty, or by grieving the loss of a relationship with a parent who was the target of the threat, the hypothalamus releases corticotropin-releasing hormone (CRH). This CRH then causes the anterior pituitary gland to secrete adrenocorticotrophic hormone (ACTH), which subsequently causes the adrenal cortex to produce and release cortisol, the main glucocorticoid stress hormone (Kamyshnyi et al., 2025). In normal situations, this response is self-limiting since cortisol acts as a negative feedback signal on both the hypothalamus and the pituitary, reducing the release of further CRH and ACTH and thereby restoring homeostasis.

However, in children who are exposed to chronic PABs, this regulatory mechanism is severely disturbed. Because the stressor is continuous, the negative feedback loop cannot function properly (Kamyshnyi et al., 2025). This leads to chronic hyperactivation of the HPA axis, marked by consistently high basal cortisol levels and a greatly enhanced cortisol response to acute stressors. Kamyshnyi et al. (2025) suggested that alienated children might have cortisol levels 10 to 12 times higher than baseline, with salivary cortisol often going above 300 nmol/L when they are under acute stress. Kuhlman et al. (2018) showed that young people whose fathers had reported an increase in interparental conflict over an eight-week period displayed an exaggerated HPA axis response to acute stress, thus providing direct empirical evidence of a link between family conflict and cortisol dysregulation in children. The following Figure 1 illustrates the step-by-step neuroendocrine cascade through which parental alienating behaviors activate the HPA axis and contrasts the resulting salivary cortisol response profiles across child groups to demonstrate the disproportionate stress burden carried by severely alienated children. HPA axis activation cascades in parental alienation (left) and illustrative salivary cortisol response patterns across child groups (right). Error bars represent ± 1 SE; Cohen's d effect sizes are annotated above each group. Hair Cortisol Concentration as a Longitudinal Biomarker.



HPA axis activation cascade in parental alienation (left) and illustrative salivary cortisol response patterns across child groups (right). Error bars represent ± 1 SE; Cohen's d effect sizes are annotated above each group.

Figure 1. HPA axis activation cascades in parental alienation and cortisol profile schema

Hair Cortisol Concentration as a Longitudinal Biomarker

A highly important methodological development from a clinical point of view is the use of hair cortisol concentration (HCC) as a measure of long-term stress exposure. Unlike salivary or plasma cortisol, which indicate acute stress states, HCC reflects cortisol secretion over periods of weeks or months, with each centimeter of hair corresponding to about four weeks of cortisol exposure (Melinder et al., 2023). As a result, HCC becomes a uniquely reliable biomarker for the kind of chronic, ongoing stress that is typical of PA. Melinder et al. (2023) found a highly significant correlation between the HCC levels of parents and children in a clinical group ($p < .001$), and in a regression model that accounted for 44% of the variance, the child's HCC was the only significant predictor of the parent's HCC. This two-way relationship is especially relevant in the context of PA: the elevated cortisol levels and psychological distress of the alienating parent are passed on to the child via dysfunctional parenting, while the child's behavioral problems in turn increase the parent's stress, thus setting up a self-reinforcing cycle of physiological dysregulation.

Downstream Biological Consequences

In alienated children, the prolonged presence of cortisol sets off a series of damaging effects on the body's systems. Because of continuous exposure to glucocorticoids, glucose homeostasis is disrupted, visceral fat increases, and insulin resistance occurs, while lymphocyte proliferation is inhibited and pro-inflammatory immune responses are suppressed (Kamyshnyi et al., 2025). On the other hand, chronic stress causes low-level systemic inflammation by increasing the levels of pro-inflammatory cytokines such as interleukin-6 (IL-6), tumor necrosis factor-alpha (TNF- α), and C-reactive protein (CRP). Most importantly, chronic stress leads to permanent epigenetic changes.

The gene for the glucocorticoid receptor (NR3C1) is methylated, and the FKBP5 gene is dysregulated, thereby permanently altering the child's stress response and embedding a biological susceptibility to psychiatric and metabolic disorders that continues into adulthood (Kamyshnyi et al., 2025).

Table 1 maps each major biological pathway activated by chronic stress in parental alienation to its measurable biomarkers, its acute clinical manifestations, and the long-term health sequelae that accumulate when the stressor remains unresolved.

Table 1. Molecular Mechanisms and Systemic Health Impacts of Chronic Stress in Parental Alienation

Biological Pathway	Primary Biomarkers	Acute Health Impact	Long-Term Sequelae
HPA Axis Dysregulation	Cortisol (>300 nmol/L saliva), ACTH	Sleep disruption, immune suppression, hypervigilance	Metabolic syndrome, type 1 diabetes, endocrine disruption
Neuroinflammation	IL-6, TNF- α , CRP (>3 mg/L)	Fatigue, mood instability, cognitive impairment	Cardiovascular disease, autoimmune disorders
Neurotransmitter Dysregulation	Reduced serotonin, elevated norepinephrine	Anxiety, depression, impulsivity	Substance use disorder, neurological impairment
Oxidative Stress	ROS, 8-OHdG, MDA, GSH/GSSG ratio	Cellular damage, endothelial dysfunction	Accelerated aging, telomere shortening, atherosclerosis
Epigenetic Modification	NR3C1 methylation, FKBP5 dysregulation, miR-124	Altered stress reactivity, HPA sensitization	Heritable vulnerability to psychiatric and metabolic disease
Gut Microbiota Dysbiosis	Firmicutes/Bacteroidetes ratio, LPS, SCFAs	Gastrointestinal distress, mood dysregulation	Irritable bowel syndrome, inflammatory bowel disease

Psychological Correlates: Attachment Theory perspectives

Attachment theory, put forward by John Bowlby, offers an essential theoretical basis for understanding the psychological damage caused by parental alienation. He believed that the establishment of a secure attachment relationship between an infant and its main caregiver is a biological necessity, having evolved to ensure that the infant remains near a protective figure when threatened (Reisz et al., 2017). This "secure base" enables the child to explore the environment with confidence, because it knows that the caregiver will be there and responsive.

Attachment Styles and Their Formation

Mary Ainsworth's later research put Bowlby's theory into practice by identifying different attachment styles using the Strange Situation paradigm. Children who are securely attached regard the caregiver as a place of safety and easily resume exploration after short periods of separation. Children who are insecurely avoidant suppress their need for attachment and seem indifferent to the caregiver leaving and coming back.

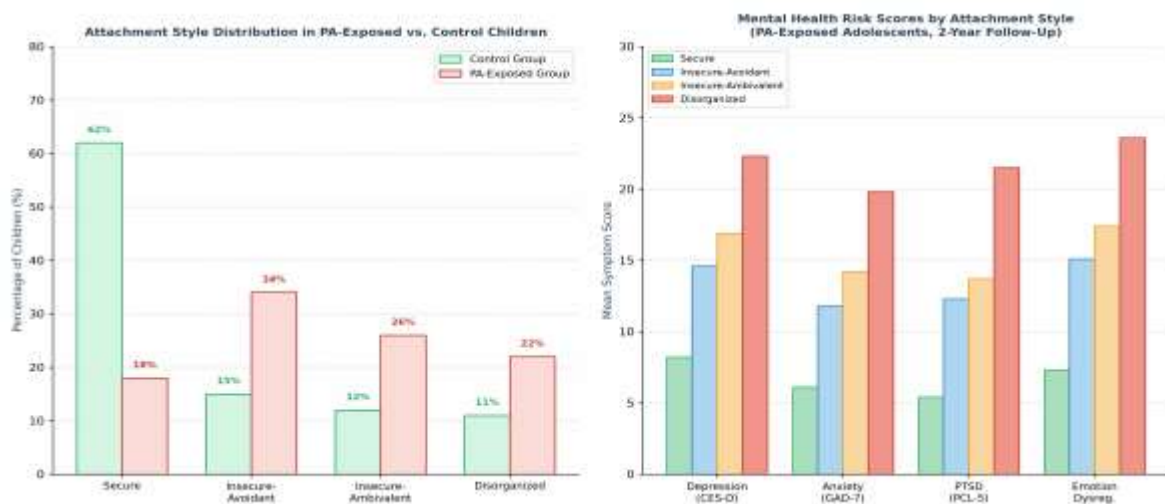
Children who are insecurely ambivalent are constantly concerned about whether the caregiver is available and show greater distress. Disorganized attachment, as identified by Main and Hesse, is

marked by a failure of any coherent attachment strategy and usually occurs when the caregiver is at the same time a source of fear and a source of comfort (Reisz et al., 2017). The importance of disorganized attachment in relation to PA is especially clear: in the case of the alienating parent-child relationship, the alienating parent is at the same time the child's main attachment figure and the cause of the child's most severe psychological distress.

How Parental Alienating Behaviors Disrupt Attachment

Wang and others in 2025 showed, using a three-wave longitudinal study involving 837 Chinese adolescents over a period of two years, that peer association behaviors were closely linked with lower levels of subjective well-being and with greater feelings of depression, anxiety, and loneliness. Most importantly, parent-child attachment was found to act as the main mediator in this connection. The study identified a sequence of mediation: peer association behaviors initially disturbed the security of parent-child attachment, and this in turn damaged the adolescent's ability to regulate their emotions, specifically by increasing expressive suppression and decreasing cognitive reappraisal, thereby worsening their mental health risks. The chain mediation model (peer association behaviors → attachment disruption → impairment of emotion regulation → mental health outcomes) thus offers a mechanism explaining how social behaviors can lead to psychological disorders.

Figure 2 quantifies the shift in attachment style distribution between PA-exposed and control children and links each attachment classification to its corresponding elevation in mental health risk scores at a two-year follow-up, making the psychological cost of alienation empirically visible.



Left: Shift from secure to insecure and disorganized attachment styles in PA-exposed versus control children. Right: Corresponding elevation in mental health risk scores across attachment styles at 2-year follow-up.

Figure 2. Attachment style distribution between PA-exposed and control children

Long-Term Psychological Consequences and Intergenerational Transmission

The systematic review by Miralles et al. (2023) synthesized thirteen studies on the long-term emotional consequences of childhood exposure to PA, finding that adults who were alienated as children exhibit depression and anxiety symptoms, a higher risk of psychopathology, lower self-esteem, higher rates of alcohol and drug use, difficulties in parental relationships, insecure attachment, lower quality of life, higher divorce rates, and feelings of loss, abandonment, and guilt.

Verhaar et al. (2022) found that 55% of adult participants reported experiencing depression and anxiety, 40% described personality difficulties including borderline features, and 20% reported eating disorders that developed in adolescence. Furthermore, Sun et al. (2026) demonstrated through structural equation modeling that a mother's alienation from her own parents significantly predicted the child's alienation from the mother, establishing a clear intergenerational pathway.

Social and Behavioral Correlates: Observational Data

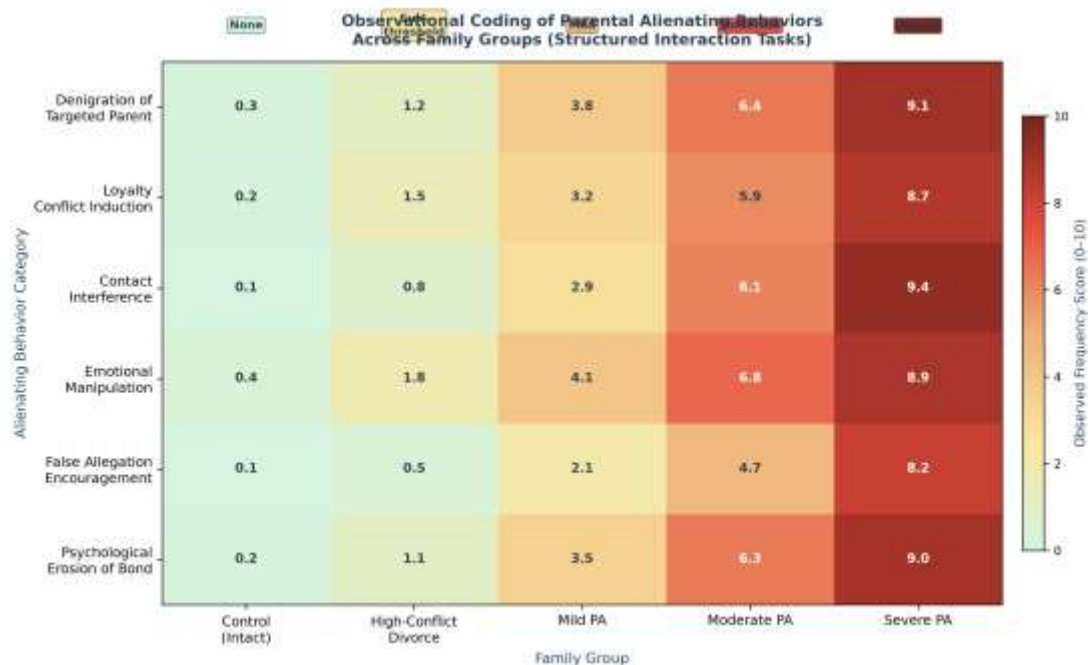
The fact that self-report data has limitations when it comes to assessing parental alienation is well known. Since children who have been alienated have suffered psychological manipulation and indoctrination, they usually support the alienating parent's version of events and firmly deny having been coached or manipulated (Bernet & Greenhill, 2022). Objective observational data is thus a vital third element in the assessment of parental alienation.

Structured Behavioral Coding and Differential Diagnosis

Structured observational coding systems consist of direct observation and the systematic coding of parent-child interactions under standardized conditions. The Parenting Coding Observation System (P-COS) is an example of a validated tool of this kind, combining the qualitative and quantitative elements of parenting behavior to provide direct input for clinical practice (Hill et al., 2008).

The key behavioral signs indicating that a child is alienated, as found through structured observation, are a campaign of denigration directed at the parent in question; a marked lack of ambivalence (i.e., splitting); the 'independent thinker' phenomenon; the use of borrowed scenarios with adult vocabulary; and a striking lack of guilt about the cruel treatment meted out to the targeted parent. The most important role that observational data plays in forensic situations is to enable a distinction to be made between parental alienation and justified estrangement, since in the latter case the child's rejection is based on the targeted parent's real abusive or neglectful behavior.

Figure 3 uses a behavioral frequency heatmap to display the relative intensity of specific parental alienating behaviors observed across different family groups during structured clinical interaction tasks, providing a visual basis for comparing the severity profiles of alienating versus non-alienating family systems.



Heatmap of observed frequency scores for parental alienating behavior categories across family groups during structured clinical interaction tasks. Higher scores indicate greater frequency and severity.

Figure 3. Observational Coding of PA's Behaviors across Family Groups

Differential Diagnostic Criteria for Parental Alienation vs. Justified Estrangement
Table 2 provides a side-by-side comparison of the key clinical and behavioral indicators that allow forensic evaluators and family court professionals to distinguish genuine parental alienation from justified estrangement rooted in actual abuse or neglect.

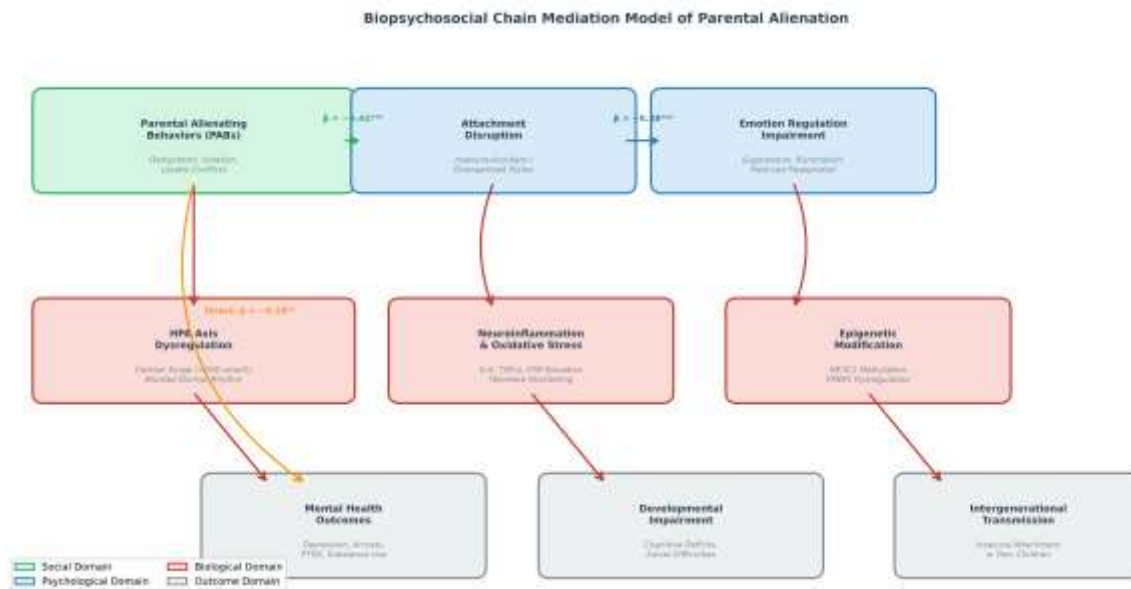
Table 2. Differential Diagnostic Criteria for Parental Alienation vs. Justified Estrangement

Criterion	Parental Alienation	Justified Estrangement
History of Relationship	Previously positive relationship with targeted parent	History of abuse, neglect, or frightening behavior
Child's Affect	Rehearsed hostility; absence of genuine fear	Genuine fear or avoidance proportionate to events
Ambivalence	Absent; splitting (idealization/devaluation)	Present; child acknowledges some positive qualities
Language Used	Adult vocabulary; borrowed scenarios	Age-appropriate language; child's own experiences
Guilt	Absent; child shows no remorse for cruelty	Present; child may express sadness or conflict
Consistency	Rejection consistent across all contexts	Rejection context-specific
Alienating Parent Behavior	Evidence of denigration, interference, indoctrination	No evidence of systematic alienating behaviors

A Biopsychosocial Chain Mediation Model

The three domains discussed above are not separate; instead, they interact as part of a dynamic and mutually reinforcing system. The biopsychosocial model of PA proposed here views these interactions as proceeding through a chain-mediated pathway, in which social-level factors (PABs) trigger psychological mechanisms (namely attachment disruption and emotion dysregulation), which are then biologically realized via hyperactivation of the HPA axis, neuroinflammation, and epigenetic modification.

Observational data acts as the behavioral expression of this biopsychosocial system; the splitting, borrowed scenarios, and the absence of guilt are the observable manifestations of a child whose attachment system has been fundamentally distorted, whose stress response is chronically dysregulated, and whose cognitive and emotional development has been profoundly compromised. Figure 4 depicts the integrated chain mediation model proposed in this paper, showing how social-level parental alienating behaviors sequentially disrupt psychological attachment, trigger biological HPA axis dysregulation, and ultimately produce the severe mental health outcomes and intergenerational transmission documented in the literature.



Biopsychosocial chain mediation model demonstrating how social catalysts (PABs) disrupt psychological attachment, leading to biological HPA axis dysregulation, which collectively result in severe mental health outcomes and intergenerational transmission. Standardized regression coefficients (β) are shown for key pathways.
Figure 4. Biopsychosocial chain Mediation Model of PA

The following table 3 presents the full multimodal assessment framework recommended by this paper, specifying the validated instruments, observable indicators, and clinical interpretation guidelines for each of the four assessment domains: biological, psychological, social-behavioral, and legal- contextual.

Table 3. Integrated Biopsychosocial Assessment Framework for Parental Alienation

Assessment Domain	Instruments / Methods	Key Indicators	Interpretation
Biological	Hair cortisol concentration (HCC), salivary cortisol, blood inflammatory markers, epigenetic assays (NR3C1 methylation)	Elevated HCC; exaggerated cortisol stress response; elevated IL-6 and CRP; NR3C1 hypermethylation	Objective evidence of chronic stress load; supports PA diagnosis in conjunction with other data
Psychological	Strange Situation Procedure, Adult Attachment Interview, Baker Strategy Questionnaire (BSQ), PARQ, CES-D, GAD-7, PCL-5	Disorganized or insecure-avoidant attachment; high BSQ scores; elevated depression, anxiety, PTSD	Identifies attachment disruption and psychological sequelae; differentiates PA from estrangement
Social / Behavioral	Structured parent-child observation (P-COS), Rowlands Parental Alienation Scale, forensic interview	Splitting, borrowed scenarios, absence of guilt, campaign of denigration, independent thinker phenomenon	Provides objective behavioral evidence of indoctrination; critical for differential diagnosis
Legal / Contextual	Review of court records, custody history, collateral interviews, school and medical records	History of contact interference, false allegations, legal manipulation	Contextualizes behavioral and biological findings within the family system

DISCUSSION

Clinical and Legal Implications

The clinical application of the biopsychosocial model described in this paper has important consequences for both practice and legal cases. It contends that no single method of assessment should be used by itself; for instance, a child showing high levels of cortisol in their hair, a disorganized attachment pattern, and behavioral signs of alienation as observed in structured situations offers a convergent body of evidence which is much more convincing than any single self-report measure.

Mental health professionals operating in family court settings should receive training in how to carry out and interpret all three aspects of the assessment. In a legal context, the fact that objective biomarkers are available, especially cortisol and markers of inflammation—could change the course of child protection proceedings. As Kamyshnyi et al. (2025) pointed out, a molecular diagnostic panel could enable the courts to obtain measurable evidence of the biological harm being done to a child, thus supporting judicial decisions to alter custody arrangements or to require therapeutic interventions.

Clinical Interventions and Therapeutic recommendations

A paradigm shift is needed in how parental alienation is treated since traditional family therapy often fails and may even worsen the situation; this is because such therapy is based on the idea that all the family members have the same aim of reconciliation and that each of them is equally to blame for the conflict (Blotcky & Bernet, 2024).

In instances of parental alienation, the alienating parent deliberately hinders the progress of therapy to keep the child rejecting the parent who is the target of the alienation. As a result, the interventions must be specially adapted according to the degree of alienation and must consider the pathology of each family member.

Interventions for Mild to Moderate Alienation

In cases of mild parental alienation (in which contact resistance is limited) and in those involving moderate parental alienation (where resistance is persistent but the child at times takes pleasure in the parenting time), a comprehensive treatment strategy should be adopted (Blotcky & Bernet, 2024). The court should require that the alienating parent receive individual therapy with a professional who specializes in alienation dynamics, with the aim of stopping the alienating behaviors. At the same time, reunification therapy should be carried out between the child who has been alienated and the parent who is the target of the alienation. Reunification therapy is a specialized form of family therapy designed to restore the broken attachment bond, set up healthy boundaries and enhance communication (Blotcky & Bernet, 2024). However, reunification therapy will only be successful if the individual therapy of the alienating parent stops their sabotaging behavior; if it does not, the reunification process will come to a standstill. From a biopsychosocial point of view, the interventions at this stage should also include mindfulness-based stress reduction (MBSR) and somatic regulation techniques to deal with the child's high cortisol levels and their dysregulated HPA axis response.

Interventions for Severe Alienation

Severe PA, defined by a total refusal to make contact and by a deep psychological entanglement with the alienating parent, necessitates firm and structural intervention. It is the agreement of PA specialists that the child who is alienated should be temporarily taken out of the care of the alienating parent (Blotcky & Bernet, 2024). Leaving a severely alienated child continued in the care of the coercively controlling parent amounts to ongoing psychological abuse and ensures that any therapeutic intervention will fail (Haines et al., 2017).

Family courts ought to require that primary physical custody be given to the parent who is the target of the alienation, together with a no-contact period, usually lasting 90 days or longer between the child and the alienating parent (Blotcky & Bernet, 2024). This separation is necessary to allow the child's continuously activated HPA axis to calm down and to break the disorganized attachment pattern. While undergoing this period, specialized intensive reunification programs, such as Family Bridges or similar immersive courses, are strongly advised. These educational and experiential programs are intended to assist children who have been severely alienated by teaching

them how to think critically and by helping them identify cognitive distortions, all without directly confronting the alienating parent (Blotcky & Bernet, 2024). After the first reunification stage, the child and the targeted parent should continue with aftercare therapy to stabilize the improved relationship. The alienating parent can only gradually resume supervised contact once they have shown significant behavioral change because of receiving specialized individual therapy.

Table 4 translates the biopsychosocial evidence into a practical, severity-tiered clinical roadmap, mapping each level of parental alienation to the appropriate child presentation, recommended therapeutic intervention, specific family court order, and the corresponding biological and psychological target of treatment.

Table 4. Severity-Based Treatment Protocol for Parental Alienation

PA Severity	Child Presentation	Recommended Intervention	Family Court Order	Biopsychosocial Target
Mild	Contact resistance; enjoys time once visits begin	Psychoeducation for alienating parent; brief co-parenting counseling	Strong directive from judge or parenting coordinator to cease alienating behaviors	Reduce acute cortisol reactivity; reinforce secure attachment behaviors
Moderate	Persistent contact refusal; oppositional during parenting time	Individual therapy for alienating parent (PA-specialist); concurrent reunification therapy for child and targeted parent	Court-mandated individual therapy for alienating parent; reunification therapy; parenting coordinator appointed	Regulate HPA axis; restore insecure-avoidant attachment toward security; improve emotion regulation
Severe	Complete contact refusal; profound enmeshment; no communication with targeted parent	Temporary custody transfer to targeted parent; 90-day no-contact period; intensive reunification program (e.g., Family Bridges); individual therapy for alienating parent; aftercare reunification therapy	Immediate temporary custody modification; no-contact order for alienating parent; court-monitored compliance; graduated supervised visitation for alienating parent post-treatment	Decompress chronically dysregulated HPA axis; disrupt disorganized attachment; dismantle cognitive distortions; address epigenetic stress load through sustained therapeutic relationship

Family Court Recommendations and Judicial Interventions

Family courts have a vital role to play in dealing with PA since the involved parties are by nature unable to settle the conflict on their own (Blotcky & Bernet, 2024). It is essential that judges and legal professionals understand that PA constitutes a form of domestic violence and psychological child abuse. The recommendations set out below are based on the biopsychosocial evidence examined in this paper.

First, courts should stop requiring generic "family therapy" or stand-alone "reunification therapy" without first looking at the alienating parent's behavior, since this consistently results in treatment

failing and worsens the alienation (Blotcky & Bernet, 2024). Second, in cases of severe alienation, courts must be willing to grant temporary reversals of custody and impose no-contact periods. If judicial intervention is delayed, the biological and psychological damage will continue to accumulate. Third, courts ought to ask evaluators to use the biopsychosocial framework which should include observational coding (for example, P-COS) and, where possible, biological stress markers, so that they can accurately tell the difference between parental alienation and justified estrangement (Hill et al., 2008). Fourth, in cases of moderate to severe alienation, courts should appoint a qualified parenting coordinator to supervise the complex treatment plan, make sure that the court orders are followed, and help facilitate communication among the various specialized therapists (Blotcky & Bernet, 2024). Fifth, courts should require follow-up biological assessments (for instance, HCC measurements every six months) to provide objective and quantifiable evidence of whether the child's stress level is improving or worsening, thus aiding future decisions regarding custody and contact.

Limitations and Future Research Directions

It is necessary to recognize several limitations of the existing evidence base. Firstly, most of the studies concerning PA make use of convenience samples, which reduces the extent to which the results can be generalized. Secondly, there are few longitudinal biomarker studies focusing on children exposed to PA; instead, most of the biological evidence is derived from broader models of chronic pediatric stress (Kamyshnyi et al., 2025). Thirdly, the direction of causality in the relationships outlined in the chain mediation model needs to be further established through prospective longitudinal studies that include objective biological measurements. Fourthly, because PA shows cultural specificity, both the assessment tools and the treatment protocols need to be validated across different cultures.

Research in the future should focus on developing and validating a standard molecular diagnostic panel for PA, including measurements of cortisol, inflammatory markers, and epigenetic tests. Longitudinal studies that follow the biological and psychological developments of children who are alienated through reunification therapy would offer important evidence regarding the effectiveness of biopsychosocial interventions. There is an urgent need for randomized controlled trials that compare PA-specific treatment programs (for example, Family Bridges combined with individual therapy for the alienating parent) with standard treatment conditions to build up an evidence base for court-ordered interventions.

Conclusion

Parental alienation constitutes a type of psychological child abuse which has a measurable and long-lasting impact on the child's biological, psychological, and behavioral aspects. The continual stress experienced by the child because of being under the control of an alienating parent causes dysregulation of the HPA axis, increases cortisol levels and inflammatory markers, and leads to epigenetic changes that result in a long-term susceptibility to both mental and physical illness. Psychologically, the deliberate disruption of the child's attachment relationship leads to the

development of insecure and disorganized attachment patterns, hampers the child's ability to regulate emotions, and sets off a course of psychopathology that often continues into adulthood and is passed on to the following generation. Behaviorally, the child who has been alienated shows a clear and identifiable pattern, namely, splitting, the use of borrowed scenarios, a lack of guilt, and a campaign of denigration, that can be objectively evaluated by means of structured observational coding.

The rigorous and empirically based framework for the comprehensive evaluation and treatment of PA that is proposed in this paper can enable clinicians and legal professionals to go beyond the drawbacks of relying on subjective self-reports and instead adopt an objective, defensible, and in the end more just method of safeguarding the welfare of children who have been alienated. It is essential that interventions be matched to the severity of the case: for mild and moderate cases coordinated individual and reunification therapy should be provided, whereas in serious cases decisive judicial action is required, including changes to temporary custody and intensive reunification programs. The biological evidence of harm quantifiable through cortisol levels, inflammatory markers, and epigenetic signatures, gives family courts the objective basis they need to act quickly and firmly in the child's best interests.

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