DOI: 10.14744/DAJPNS.2026.00327
Dusunen Adam J Psychiatr Neurol Sci
2026;39:142-152

RESEARCH ARTICLE

Psychiatric and medical profiles of children receiving health protection measures in a tertiary care facility: A five-year analysis

Duygu Kinay Ermis, Omca Guney, Nurdan Kasar

Basaksehir Cam and Sakura City Hospital, Department of Child and Adolescent Psychiatry, University of Health Sciences, Istanbul, Turkiye

ABSTRACT

Objective: This study examined the psychiatric and medical characteristics of children and adolescents receiving health protection measures and explored their associations with maltreatment types, self-injurious behaviors, and suicide attempts.

Method: Medical records of 331 children and adolescents followed under health protection measures at a single tertiary care hospital were retrospectively reviewed. Data were collected using a standardized file review form that included sociodemographic variables, psychiatric diagnoses, child protection characteristics, and risk factors. Psychiatric diagnoses were established according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria. Statistical analyses compared diagnostic distributions across maltreatment subgroups and examined associations with self-injurious behavior and suicide attempts.

Results: Of the 331 included cases, 235 children (71.0%) underwent psychiatric evaluation. Diagnostic distributions were analyzed within this subgroup. Among children exposed to neglect (n=161), intellectual disability (29.8%), attention-deficit/hyperactivity disorder (28.6%), and conduct disorder (24.2%) were the most prevalent diagnoses. Major depressive disorder was significantly more common among children exposed to physical abuse (50.0%; $p<0.001$), whereas major depressive disorder (37.5%; $p=0.008$) and social anxiety disorder (18.8%; $p=0.003$) were more frequent in the extrafamilial sexual abuse group. Self-injurious behaviors and suicide attempts were observed across maltreatment groups, with significant associations between self-injury and intrafamilial sexual abuse and between suicide attempts and physical and emotional abuse. Girls exhibited higher rates of both self-injurious behavior and suicide attempts than boys ($p<0.01$). Neurological (26.0%) and endocrine (8.5%) disorders were the most common non-psychiatric medical conditions.

Conclusion: Children referred to a tertiary care facility under health protection measures demonstrated a high burden of psychiatric morbidity. Diagnostic patterns varied according to maltreatment type, highlighting the need for trauma-informed, multidisciplinary care.

Keywords: Psychiatric profiles, child protection, health measures, psychiatric diagnoses, protective measures

How to cite this article: Kinay Ermis D, Guney O, Kasar N. Psychiatric and medical profiles of children receiving health protection measures in a tertiary care facility: A five-year analysis. Dusunen Adam J Psychiatr Neurol Sci 2026;39:142-152.

Correspondence: Duygu Kinay Ermis, Basaksehir Cam and Sakura City Hospital, Department of Child and Adolescent Psychiatry, University of Health Sciences, Istanbul, Turkiye
E-mail: duygukinayy@hotmail.com

Received: December 22, 2025; **Revised:** April 12, 2026; **Accepted:** June 04, 2026

INTRODUCTION

Childhood is a period of heightened vulnerability to adverse experiences. Exposure to neglect, abuse, poverty, and other traumatic events has been consistently shown to impair cognitive, emotional, and social development, making childhood adversity a major public health concern (1). Such experiences are strongly associated with a range of lifelong psychiatric disorders, including anxiety, depression, behavioral disorders, and substance use disorders, as well as physical health conditions such as asthma, obesity, cardiovascular disease, and premature mortality (2-4). Adverse childhood experiences may also have lasting effects on brain development, resulting in deficits in learning, attention, executive functioning, and language. Nevertheless, the high neuroplasticity of the developing brain suggests that timely interventions can reverse or mitigate these effects, underscoring the importance of early, evidence-based, and multidisciplinary preventive strategies (5, 6).

Given these risks, child protection systems worldwide play a central role in safeguarding children's health and development. In Turkiye, the child protection system is governed by Child Protection Law No. 5395, which defines five protective and supportive measures: counseling, education, health, care, and shelter. These judicially mandated interventions are designed to protect children's well-being and may be implemented individually or in combination, depending on the child's needs. In practice, however, their effectiveness depends not only on the judicial decision itself but also on continuity of follow-up and coordination among health, social service, educational, and judicial institutions (7). Among these measures, health protection measures are particularly important because they facilitate access to medical and psychiatric assessment and treatment for children at risk of neglect, abuse, delinquency, substance use, or family dysfunction (8, 9). Despite their critical role, research has identified significant challenges in implementation. Continuity of follow-up is often poor; for example, one study reported that 63.3% of children failed to attend regular follow-up appointments after the initial evaluation (10). Furthermore, some children are referred exclusively to non-psychiatric services or remain outside systematic multidisciplinary monitoring, highlighting structural limitations within the child protection system (3, 11). These limitations raise an important question: What are the actual psychiatric and medical needs of children receiving health protection measures, and to what extent are these needs being addressed? Previous studies from both Turkiye and other countries have consistently documented high rates of psychiatric morbidity and substantial service gaps, providing the rationale for the present study.

Studies conducted in Turkiye have reported that 60%–80% of children receiving health protection measures are diagnosed with at least one psychiatric disorder, most commonly post-traumatic stress disorder (PTSD), attention-deficit/hyperactivity disorder (ADHD), conduct disorder (CD), anxiety disorders, and depression (3, 8, 12). These children frequently come from socioeconomically disadvantaged backgrounds and are more likely to have parents with psychiatric disorders and disrupted family structures. Additional risk factors include migration status, delinquency, and being an unaccompanied minor (12, 13). Importantly, despite the high prevalence of psychiatric disorders, treatment adherence and regular follow-up remain suboptimal, and health protection measures are often implemented in a short-term or procedural manner (3, 8). Similarly, international studies suggest that psychiatric assessment alone is insufficient; children receiving health protection measures require comprehensive, sustainable, and trauma-focused interventions (14, 15). However, multidisciplinary approaches and long-term follow-up programs remain limited, and systematic evaluations of both the effectiveness of health protection measures and the clinical and psychosocial characteristics of affected children are scarce (10, 12).

This study aimed to evaluate children and adolescents referred to a tertiary city hospital under health protection measures between April 2020 and April 2025. Specifically, it examined their sociodemographic characteristics, psychiatric diagnoses, risk indicators such as self-injurious behavior and suicide attempts, and the types and reasons for concurrent protective and supportive measures. By analyzing clinical psychiatric assessments and case records, this study sought to provide a more comprehensive understanding of the clinical profiles of these high-risk children and the challenges associated with implementing health protection measures in a tertiary care setting.

METHODS

Participants

This study included children and adolescents referred to Basaksehir Cam and Sakura City Hospital under a health protection measure between April 2020

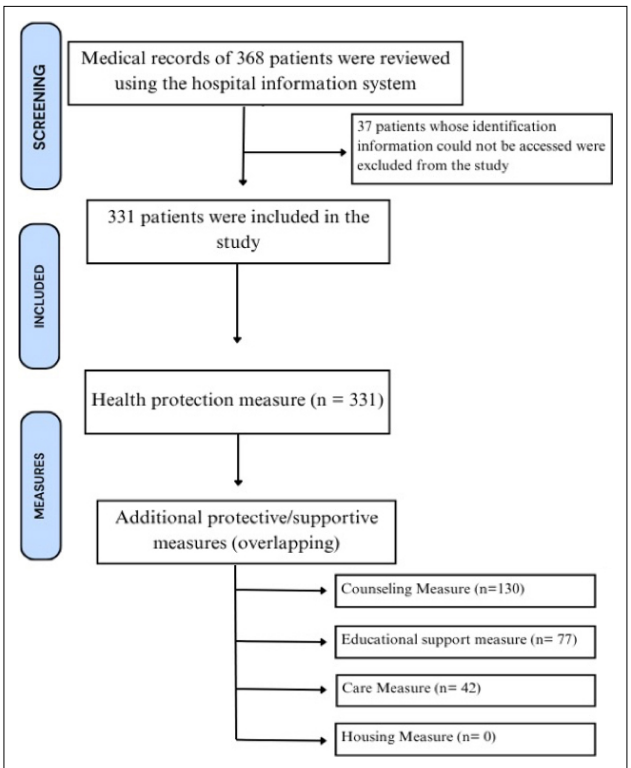

Figure 1. Flowchart of participant inclusion and the distribution of protective and supportive measures.

and April 2025. A total of 368 patient records were identified through the hospital information system and reviewed. Thirty-seven cases were excluded because identifying information was inaccessible, resulting in a final sample of 331 children and adolescents (Fig. 1). Outpatient records and social investigation reports were retrospectively reviewed. All 331 participants were receiving a health protection measure; however, not all underwent evaluation in the Child and Adolescent Psychiatry Department. Of the included cases, 235 received a face-to-face psychiatric assessment conducted by a child and adolescent psychiatry specialist. Psychiatric diagnoses were established according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria based on these clinical evaluations (16). The remaining cases were followed in other hospital departments according to their clinical needs and did not have a documented psychiatric evaluation during the available retrospective review period. Under Turkish Child Protection Law No. 5395, protective and supportive measures include counseling, education, health, care, and shelter. In the present study, all participants were receiving a health protection measure, a judicially mandated intervention intended to ensure access to medical and psychiatric assessment, treatment, and follow-up for children whose well-being is considered to be at risk. These measures may be implemented individually or concurrently according to the child's needs, and their effectiveness depends not only on the legal decision itself but also on continuity of follow-up and coordination among health, social service, educational, and judicial institutions. Accordingly, analyses involving psychiatric diagnoses were restricted to the subgroup that underwent psychiatric evaluation. Information on suicidal risk and self-injurious behavior was obtained from psychiatric interviews when such evaluations were available. Sociodemographic characteristics, clinical features, and treatment information were extracted from medical records. Data regarding the reasons for the health protection measure, concurrent protective and supportive measures (e.g., counseling, education, and care), and family and sociodemographic characteristics not available in the medical records were obtained from social investigation reports.

All data were extracted using a researcher-developed standardized data collection form. The study was approved by the Institutional Ethics Committee (Approval No. KAEK/14.05.2025.127). Written informed consent had been obtained from participants and their parents at the time of clinical evaluation. The study was conducted in accordance with the principles of the Declaration of Helsinki.

Data Collection

Data were collected using a standardized file review form developed by the researchers to ensure systematic and comprehensive extraction of information from medical records, social service reports, and legal documents. The collected variables were grouped into five domains.

1. Sociodemographic Characteristics

Information on sex, age, and nationality was recorded. Educational information was also reviewed; however, because these data were incomplete and inconsistently documented across retrospective records, they were not included in the final analyses.

2. Health Protection Measure Process

Variables related to the health protection measure process included the date of the judicial decision, the date of the first psychiatric evaluation, the interval between the decision and initiation of follow-up (days), and follow-up regularity. Regular follow-up was defined as sustained adherence to the recommended

monitoring schedule. Cases that did not attend scheduled follow-up appointments consistently and for whom continuity of care could not be maintained were classified as not receiving regular follow-up. Information regarding psychiatric assessment and treatment was also recorded.

3. Clinical Characteristics

Current psychiatric diagnoses were coded according to DSM-5 diagnostic criteria and included disorders such as PTSD, ADHD, and major depressive disorder (MDD). Treatment-related variables included receipt of psychiatric treatment, treatment intensity (monotherapy, dual-drug therapy, or treatment with three or more psychotropic medications), and treatment modality (pharmacological, psychotherapeutic, or combined). Medication classes were derived from free-text treatment records and categorized accordingly.

4. Child Protection System Variables

Information on concurrent protective and supportive measures (e.g., counseling, education, care, and shelter) was collected, together with data regarding visitation orders, parental divorce or custody disputes, and whether the child had been abandoned or found.

5. Risk Factors

The selected risk factors were chosen because they could be identified relatively consistently and reliably within retrospective records and were considered clinically and legally relevant within the child protection context. They were not intended to represent an exhaustive list of psychosocial risk factors but rather predefined indicators that could be captured in a standardized manner within the available record system. The following risk factors were assessed and coded:

- History of delinquency
- Unaccompanied foreign minor status
- History of substance use
- Terrorism-related background.

Because these variables were either absent or observed at very low frequencies within the study sample, they are presented in the Supplementary Material rather than analyzed as primary variables in the main Results section (Supplementary Table 2).

Self-injurious behavior was defined as any intentional act of self-inflicted bodily harm without suicidal intent, including behaviors such as cutting, burning, hitting oneself, or head banging. Cases were coded as "present" when such behaviors were documented and "absent" otherwise.

A suicide attempt was defined as any self-directed behavior accompanied by evidence of intent to die, regardless of outcome. Examples included medication overdose, hanging, jumping from a height, and self-inflicted injury with suicidal intent. Cases were coded as "present" when at least one suicide attempt was documented and "absent" otherwise.

All variables were extracted from hospital medical records, social service reports, and relevant legal documents and subsequently entered into the study database for statistical analysis.

Statistical Analysis

Statistical analyses were performed using IBM SPSS Statistics version 26.0 (IBM Corp., Armonk, NY, USA). All eligible cases identified during the study period were included in the analyses. Continuous variables are presented as mean±standard deviation (SD), whereas categorical variables are presented as frequencies and percentages (%). The normality of continuous variables was assessed using skewness and kurtosis values. Age, which demonstrated a normal distribution, was compared between groups using the independent-samples t test. Associations between categorical variables were examined using Pearson's chi-square test, and Fisher's exact test was used when expected cell frequencies were less than five. All statistical tests were two-tailed, and a p-value <0.05 was considered statistically significant. Given the limited sample sizes in several maltreatment subgroups, comparative analyses should be considered exploratory and interpreted with caution. Furthermore, owing to the descriptive and exploratory design of the study, the findings should not be interpreted as indicating causal relationships.

RESULTS

Sample and Clinical Characteristics

Of the 368 medical records initially screened, 37 were excluded because of missing identification data, resulting in a final sample of 331 children and adolescents (Fig. 1). Of the included participants, 152 (45.9%) were female and 179 (54.1%) were male, with a mean age of 11.37±4.86 years. Most participants were Turkish nationals (76.7%), followed by Syrian nationals (19.3%) and individuals of other nationalities (3.9%) (Table 1). Of the 331 included cases, 210 children (63.4%) received regular follow-up. A total of 235

Table 1: Sociodemographic, clinical, and treatment characteristics of the study sample

Characteristic	n	%
Sex		
Female	152	45.9
Male	179	54.1
Age (mean±SD)	11.37±4.86	
Time from decision to first evaluation (months), median (IQR)	3.27 (1.33–11.03)	
Regular follow-up	210	63.4
Psychiatric evaluation	235	71.0
Psychiatric treatment initiated	123	37.2
Monotherapy	60	48.8
Dual-drug treatment	45	36.6
Three or more psychotropic medications	18	14.6
Medication class		
Antipsychotics	90	73.2
SSRI	54	43.9
Stimulants/methylphenidate	32	26.0
Atomoxetine	10	8.1
Other medications*	10	8.1
Non-psychiatric specialty evaluations		
Pediatric neurology	86	26.0
Pediatric endocrinology	28	8.5
Physical therapy and rehabilitation	20	6.0
Pediatric gastroenterology	19	5.7
Ophthalmology	18	5.4
Otolaryngology (ENT)	17	5.1
Pediatric nephrology	16	4.8
Orthopedics	14	4.2
Pediatric metabolism	14	4.2
General pediatrics	13	3.9
Hematology–oncology	12	3.6
Other specialties**	37	11.2
Nationality		
Turkish	254	76.7
Syrian	64	19.3
Other (Afghan, Chinese, Turkmen, Palestinian, Algerian, Azerbaijani)	13	3.9

*: Other medications included biperiden, melatonin, antiepileptic agents, and guanfacine; **: Other specialties included Genetics (n=8), Pulmonology (n=8), Pediatric Surgery (n=10), Urology (n=6), Allergy (n=4), Neurosurgery (n=4), Immunology (n=2), and Dermatology (n=2). Percentages for monotherapy, dual-drug treatment, treatment with three or more psychotropic medications, and medication classes were calculated among children who received psychiatric treatment (n=123). Medication classes were derived from free-text treatment records and were not mutually exclusive; therefore, individual children could be represented in more than one medication category.

children (71.0%) underwent face-to-face psychiatric evaluation in the Child and Adolescent Psychiatry Department, whereas the remaining children were followed in other hospital departments according to their clinical needs under the health protection measure. Among those who underwent psychiatric evaluation, psychiatric treatment was initiated in 123 children; in the remaining cases, psychiatric treatment was not considered clinically indicated at the time of assessment. In addition to psychiatric care, referrals to non-psychiatric specialties were common. The most frequent specialties involved were pediatric neurology (26.0%), pediatric endocrinology (8.5%), and physical therapy and rehabilitation (6.0%). Lower frequencies were observed for pediatric gastroenterology, ophthalmology, otolaryngology, nephrology, orthopedics, and other specialties. The non-psychiatric specialties presented in Table 1 were based on the entire sample of 331 cases and did not exclusively represent referrals following psychiatric assessment. Some children were followed directly by other specialties according to their medical conditions and clinical needs under the health protection measure. More than one specialty evaluation could be recorded for a single case. Low-frequency child protection system variables and predefined risk factors are summarized in Supplementary Table 2.

Psychiatric Diagnoses According to Maltreatment Type

The distribution of psychiatric diagnoses differed across the maltreatment subgroups (Table 2). Analyses in this section were restricted to children who underwent psychiatric evaluation.

Among children exposed to neglect (n=161), the most prevalent diagnoses were intellectual disability (29.8%), attention-deficit/hyperactivity disorder (28.6%), and conduct disorder (24.2%). ADHD showed a significant variation across maltreatment groups (p=0.003).

Among children exposed to physical abuse (n=28), major depressive disorder was the most frequent diagnosis (50.0%; p<0.001). Generalized anxiety disorder (25.0%; p=0.007) and oppositional defiant disorder (21.4%; p=0.013) were also significantly more common in this group.

In the emotional abuse group (n=9), major depressive disorder was the most prevalent diagnosis (55.6%; p=0.002), and ADHD was also frequently observed (33.3%).

Internalizing disorders were particularly prominent among children exposed to sexual abuse. Social anxiety

Table 2: Distribution of psychiatric diagnoses according to maltreatment type

Psychiatric diagnosis	Neglect (n=161) n (%)	Physical abuse (n=28) n (%)	Emotional abuse (n=9) n (%)	Intrafamilial sexual abuse (n=11) n (%)	Extrafamilial sexual abuse (n=16) n (%)
ADHD	46 (28.6)**	6 (21.4)	3 (33.3)	0	4 (25.0)
MDD	26 (16.1)	14 (50.0)***	5 (55.6)**	4 (36.3)*	6 (37.5)**
CD	39 (24.2)	8 (28.6)	1 (11.1)	2 (18.2)	5 (31.3)
ID	48 (29.8)	2 (7.1)	1 (11.1)	2 (18.2)	1 (6.3)
GAD	22 (13.7)	7 (25.0)**	2 (22.2)	2 (18.2)	3 (18.8)
SpLD	27 (13.7)	1 (3.6)	1 (11.1)	0	1 (6.3)
ODD	18 (11.2)	6 (21.4)*	2 (22.2)	0	3 (18.8)
SLD	18 (11.2)	2 (7.1)	1 (11.1)	1 (9.1)	2 (12.5)
ASD	22 (13.7)	1 (3.6)	0	0	0
SAD	4 (2.5)	0	0	2 (18.2)*	3 (18.8)**
PanD	4 (2.5)	1 (3.6)	0	0	1 (6.3)
OCD	2 (1.2)	1 (3.6)	1 (11.1)	0	1 (6.3)
Mania/hypomania	1 (0.6)	1 (3.6)	0	0	0
Eating disorder	1 (0.6)	1 (3.6)	0	0	0
PsyD	1 (0.6)	0	0	0	0
Other disorders*	–	–	–	–	–

*Disorders occurring fewer than three times across all maltreatment subgroups (e.g., agoraphobia, tic disorders, impulse-control disorders, etc.) are not shown for clarity. Statistically significant subgroup associations are indicated as follows: p<0.05 (*), p<0.01 (**), p<0.001 (***). ADHD: Attention-deficit/hyperactivity disorder; ASD: Autism spectrum disorder; CD: Conduct disorder; CSA: Child sexual abuse; Dx: Diagnosis; ED: Eating disorders; GAD: Generalized anxiety disorder; ID: Intellectual disability; M/H: Mania/hypomania; MDD: Major depressive disorder; OCD: Obsessive-compulsive disorder; ODD: Oppositional defiant disorder; PanD: Panic disorder; PsyD: Psychotic disorder; SAD: Social anxiety disorder; SLD: Specific learning disorder; SpLD: Speech/language disorder. Values are presented as n (%). Diagnoses are ordered according to their overall frequency across maltreatment subgroups.

Table 3: Association between maltreatment types and clinical variables

Variables	Neglect (n=161) n (%)	Physical abuse (n=28) n (%)	Emotional abuse (n=9) n (%)	Intrafamilial CSA (n=11) n (%)	Extrafamilial CSA (n=16) n (%)
Self-injurious behavior	25 (15.5)	6 (21.4)	0 (0.0)	4 (36.4)*	3 (18.8)
Suicide attempt	16 (9.9)	6 (21.4)*	3 (33.3)*	3 (27.3)	1 (6.3)

Values are presented as n (% within maltreatment subgroup). Maltreatment categories were not mutually exclusive, and not all psychiatrically evaluated children could be classified into the maltreatment categories shown. Therefore, column totals do not necessarily correspond to the overall number of children with self-injurious behavior or suicide attempts. Statistically significant subgroup associations are indicated as follows: p<0.05 (*), p<0.01 (**), p<0.001 (***). CSA: Child sexual abuse.

disorder was significantly more common in both the intrafamilial sexual abuse group (18.2%; p=0.02) and the extrafamilial sexual abuse group (18.8%; p=0.003). Major depressive disorder was also more prevalent among children exposed to extrafamilial sexual abuse (37.5%; p=0.008).

Self-Injurious Behavior and Suicide Attempts

Among the 235 children who underwent psychiatric evaluation, self-injurious behavior was identified in 36 (15.3%), and suicide attempts were documented in 28 (11.9%) (Table 3). Both self-injurious behavior and suicide attempts were more common among girls than boys (self-injury: 15.8% vs. 6.7%; suicide attempts: 16.4% vs. 1.7%, respectively).

When examined according to maltreatment type, self-injurious behavior occurred most frequently among neglected children in absolute numbers; however, a statistically significant association was observed only for intrafamilial sexual abuse (36.4%; p=0.023). Regarding suicide attempts, significantly higher rates were observed among children exposed to physical abuse (21.4%; p=0.02) and emotional abuse (33.3%; p=0.03). Although suicide attempts were also reported among neglected and sexually abused children, these associations did not reach statistical significance.

Health Protection Measures

Among the additional protective and supportive measures implemented, counseling measures were

Table 4: Categories of non-psychiatric medical conditions and representative diagnoses identified in the available records

Category	Representative diagnoses	Number of distinct diagnoses (n)
Neurological	Cerebral palsy (CP), epilepsy, hydrocephalus, congenital hypotonia, West syndrome, spinal muscular atrophy (SMA), spina bifida, migraine, medulloblastoma, craniopharyngioma	34
Developmental/genetic	Down syndrome, Angelman syndrome, neurofibromatosis type 1 (NF1), osteogenesis imperfecta, thalassemia, autism spectrum disorder (ASD), sacral agenesis, Wilms tumor, acute lymphoblastic leukemia (ALL), acute myeloid leukemia (AML)	18
Endocrine/metabolic	Type 1 diabetes mellitus, congenital hypothyroidism, adrenal insufficiency, glycogen storage disease, hypopituitarism	7
Hematological/oncological	Anemia, aplastic anemia, immune thrombocytopenia (ITP), AML, ALL, beta-thalassemia	5
Renal/cardiovascular	Chronic kidney disease (CKD), nephrotic syndrome, vesicoureteral reflux (VUR), posterior urethral valve (PUV), congenital heart disease, cardiac murmur, hydronephrosis	9
Respiratory/allergic	Asthma, rhinitis, bronchiolitis, allergic rhinitis	4
Gastrointestinal/nutritional	Protein-energy malnutrition (PEM), malnutrition, gastroesophageal reflux disease (GERD), colostomy/ileus, hypopituitarism with PEM	5
Other medical conditions	Strabismus, hearing loss, atopic dermatitis, psoriasis, juvenile idiopathic arthritis, spastic paraplegia, pilonidal cyst, acute tonsillitis, femur fracture, burn injury, etc.	49

Representative diagnoses are provided as illustrative examples within each category. The numbers in the final column represent the number of distinct diagnoses identified within each category, not the number of affected children.

the most common (39.3%), followed by educational measures (23.3%) and care measures (12.7%) (Fig. 1). Because all participants were receiving a health protection measure by definition, health measures constituted the baseline condition of the study sample rather than an additional intervention. Protective and supportive measures were not mutually exclusive, and individual children could receive multiple measures concurrently. No shelter measures were identified in the dataset.

Non-Psychiatric Diagnoses

A broad spectrum of non-psychiatric medical conditions was identified (Table 4). Neurological disorders were the most common, followed by developmental/genetic disorders, endocrine/metabolic disorders, and hematological/oncological conditions. Additional cardiological, renal, respiratory, and gastroenterological disorders were also observed, highlighting the multidimensional health needs of children receiving health protection measures. A substantial proportion of children presented with both psychiatric and non-psychiatric conditions. Specifically, 143 children (43.2% of the total sample) underwent both psychiatric and non-psychiatric evaluations (Supplementary Fig. 1, Supplementary Table 1).

DISCUSSION

In this study, psychiatric disorders were highly prevalent among children and adolescents receiving health protection measures, and diagnostic patterns varied according to the type of maltreatment experienced. Both externalizing and internalizing psychopathologies were common, underscoring the substantial mental health burden among children involved in the child protection system.

Consistent with previous research, high rates of externalizing disorders, such as ADHD and conduct disorder, as well as internalizing disorders, including anxiety and depressive disorders, were observed in this population (14, 17). These rates are substantially higher than the estimated prevalence of psychiatric disorders in the general pediatric population, which ranges from approximately 12% to 15% (18, 19). Studies conducted in Turkiye have similarly reported psychiatric diagnosis rates of 60%–80% among children receiving health protection measures (3). Taken together, these findings indicate high rates of both externalizing disorders, such as ADHD and conduct disorder, and internalizing disorders, including anxiety and depressive disorders, among children who underwent psychiatric evaluation (14, 17).

Self-Injurious Behaviors and Suicide Attempts

Self-injurious behavior and suicide attempts were identified in 15.3% and 11.9% of the psychiatrically evaluated group, respectively. Although the highest absolute numbers were observed among neglected children, statistically significant associations varied by maltreatment type. Self-injurious behavior was significantly associated with intrafamilial sexual abuse, whereas suicide attempts were significantly more frequent among children exposed to physical and emotional abuse. These findings suggest that patterns of self-injurious behavior and suicidality may differ across maltreatment categories; however, subgroup-specific findings should be interpreted cautiously because of the limited sample sizes in some abuse groups.

Previous meta-analyses have demonstrated that childhood physical, emotional, and sexual abuse are strong risk factors for both non-suicidal self-injury and suicide attempts, with reported odds ratios ranging from 2.5 to 4.9 (20-22). Emotional abuse and neglect have been identified as particularly potent predictors in some studies (21). Our findings extend this literature by suggesting that specific forms of maltreatment may be associated with distinct patterns of self-harm and suicide-related behaviors within clinically referred child protection populations.

When sex differences were examined, both self-injurious behavior and suicide attempts were markedly more common among girls than boys. This finding is consistent with previous research indicating that girls, particularly those exposed to emotional or sexual abuse, may be more vulnerable to self-harm and suicidal behavior (23, 24). Proposed mechanisms include emotional deprivation, impaired emotion regulation, depressive symptoms, and hopelessness. Furthermore, deficits in mentalization and personality functioning have been proposed as mediators linking childhood maltreatment to self-harm and suicidal behaviors (25).

Diagnostic Distributions by Maltreatment Type

Distinct diagnostic profiles were observed across maltreatment groups. Among children exposed to neglect, intellectual disability, ADHD, and conduct disorder were particularly prevalent. Previous research has demonstrated that insufficient caregiving and reduced environmental stimulation during critical developmental periods are associated with adverse cognitive outcomes, including lower intellectual functioning, language delays, and deficits in executive functioning (26-28). Neurobiological studies further suggest that early deprivation may disrupt synaptic pruning and myelination, resulting in alterations in cortical thickness and white matter integrity that contribute to long-term cognitive and behavioral difficulties (27, 29). These mechanisms may help explain the elevated prevalence of neurodevelopmental and externalizing disorders observed among neglected children.

In contrast, internalizing disorders were more prominent among children exposed to sexual abuse. Depression and social anxiety disorder were particularly common, likely reflecting trauma-related processes such as shame, guilt, fear, and interpersonal mistrust, which contribute to internalizing psychopathology (14, 15). The relatively high prevalence of depressive disorders in the emotional abuse group may be associated with chronic parental rejection, criticism, and emotional invalidation; however, this finding should be interpreted cautiously given the small subgroup size (30). Similarly, the prominence of depressive symptoms in the physical abuse group may reflect the effects of early exposure to violence on affect regulation and emotional functioning, although the relatively small sample size limits definitive conclusions (6, 31).

Multidisciplinary Health Needs

In addition to psychiatric morbidity, a substantial proportion of children required evaluation by non-psychiatric medical specialties, most commonly pediatric neurology, followed by endocrinology and physical therapy and rehabilitation. The high frequency of neurology involvement may reflect the impact of early adversity and neglect on neurodevelopment. Previous studies have shown that maltreated children experience impairments in learning, memory, language, and executive functioning, accompanied by structural and functional alterations in the prefrontal cortex, amygdala, hippocampus, and corpus callosum (27, 32).

Referrals to endocrinology were also notable. Chronic stress and trauma have been associated with long-term dysregulation of the hypothalamic–pituitary–adrenal (HPA) axis, contributing to endocrine and metabolic disturbances. Childhood maltreatment has been linked to blunted cortisol responses, flattened diurnal rhythms, and reduced physiological flexibility (33). These alterations, together with structural changes in the amygdala, hippocampus, and prefrontal cortex, may increase vulnerability to depression, anxiety, behavioral disorders, and chronic endocrine dysregulation (34). The presence of additional hematological, cardiological, renal, and respiratory conditions further emphasizes the complex and multidimensional health needs of children receiving health protection measures.

Our findings suggest that children receiving health protection measures carry substantial psychiatric and medical burdens, underscoring the need for comprehensive and sustained interventions. In Turkiye, current practices often remain limited to single assessments or short-term interventions, with inadequate coordination among psychiatry, pediatrics, and social services (10, 35). Such fragmented approaches may fail to address the multidimensional needs of these children and compromise continuity of care. International models have demonstrated the effectiveness of multidisciplinary teams that integrate psychiatric, pediatric, social, and legal services in improving both mental and physical health outcomes (14, 36). Accordingly, the establishment of multidisciplinary follow-up centers, systematic risk assessment procedures, and trauma-informed interventions is essential. Although multiple protective and supportive measures may be implemented concurrently, the potential combined effects of these interventions on outcomes such as self-injurious behavior and suicide attempts were not examined separately in the present study. Furthermore, the co-occurrence of psychiatric and non-psychiatric conditions in a substantial proportion of the sample underscores the complex and multidimensional clinical needs of children receiving health protection measures.

Limitations

This study has several limitations. First, it was conducted at a single center, which may limit the generalizability of the findings. Second, the available data were restricted to medical records, social service reports, and legal documents; consequently, incomplete or non-standardized documentation may have resulted in information loss. Third, although psychiatric diagnoses were originally established through face-to-face clinical assessments based on DSM-5 criteria, their validity could not be reassessed retrospectively. In addition, standardized and validated measures of suicidality and self-injurious behavior were not consistently available across records; therefore, these variables could only be analyzed as binary outcomes (present/absent). Furthermore, some family-related and legal variables obtained from social service reports may have reflected subjective evaluations. Variables such as maltreatment severity, duration of exposure, age at onset, time elapsed between maltreatment and clinical evaluation, and previous psychiatric treatment history were not available in a sufficiently standardized manner and therefore could not be included in the analyses. Sample sizes were relatively small in some maltreatment subgroups, particularly the physical abuse and emotional abuse groups, which may have reduced statistical power and limited the interpretation of subgroup comparisons. Accordingly, subgroup-specific findings should be interpreted with caution. Information regarding follow-up duration and the interval between the judicial decision and the initiation of follow-up was not available in a sufficiently standardized and reliable form across all cases. Consequently, these variables could not be evaluated as potential protective or risk-modifying factors. Additionally, variability in follow-up continuity precluded firm conclusions regarding long-term psychiatric and medical outcomes. Given the descriptive and exploratory nature of the study, the findings should not be interpreted as evidence of causal relationships. Despite these limitations, this study represents one of the larger single-center investigations of children and adolescents receiving health protection measures and highlights both their complex clinical needs and the systemic challenges associated with service delivery.

CONCLUSION

Children receiving health protection measures exhibit high rates of psychiatric and medical morbidity, with diagnostic profiles varying according to maltreatment type. Neglect appears to be more strongly associated with neurodevelopmental and externalizing disorders, whereas abuse-related subgroups demonstrate higher rates of internalizing psychopathology. Patterns of self-injurious behavior and suicide attempts also vary across maltreatment categories, emphasizing the importance of tailored risk assessment. These findings underscore the urgent need for systematic, trauma-informed, multidisciplinary models of care. Strengthening intersectoral collaboration and establishing specialized monitoring and follow-up centers may improve outcomes for this highly vulnerable population.

Online Supplementary Digital Appendix File: https://dusunenadamdergisi.org/storage/upload/files/1781269427-appendix-en.pdf

Ethical Approval: This study was approved by The Basaksehir Cam ve Sakura City Hospital Clinical Research Ethics Committee (Date: 03.06.2025 Decision no: KAEK/14.05.2025.127).

Informed Consent: Written informed consent was obtained from all participants and their parents at the time of clinical evaluation.

Conflict of Interest: The authors declare that there is no conflict of interest.

Financial Disclosure: The authors declared that this study has received no financial support.

Use of AI for Writing Assistance: The authors declared that artificial intelligence was not used in the study.

Contribution Categories		Author Initials
Category 1	Concept/Design	D.K.E., O.G.
	Data acquisition	D.K.E., O.G., N.K.
	Data analysis/Interpretation	D.K.E.
Category 2	Drafting manuscript	D.K.E.
	Critical revision of manuscript	D.K.E., O.G., N.K.
Category 3	Final approval and accountability	D.K.E., O.G., N.K.
Other	Supervision	O.G.

Peer-review: Externally peer-reviewed.

REFERENCES

1. McDermott CL, Norton ES, Mackey AP. A systematic review of interventions to ameliorate the impact of adversity on brain development. Neurosci Biobehav Rev 2023; 153:105391 [CrossRef]
2. Humphreys KL, LeMoult J, Wear JG, Piersiak HA, Lee A, Gotlib IQ. Child maltreatment and depression: A meta-analysis of studies using the Childhood Trauma Questionnaire. Child Abuse Negl 2020; 102:104361. [CrossRef]
3. Karagöz D. Investigation of clinical characteristics of children and adolescents followed under health precaution. Current Approaches in Psychiatry 2022; 14(Suppl. 1):268-277. [CrossRef]
4. Jackson AL, Frederico M, Cleak H, Perry BD. Childhood neglect and its implications for physical health, neurobiology and development-a scoping review of the literature. Developmental Child Welfare 2022; 4:114-135. [CrossRef]
5. Kolb B, Harker A, Gibb R. Principles of plasticity in the developing brain. Dev Med Child Neurol 2017; 59:1218-1223. [CrossRef]
6. Reh RK, Dias BG, Nelson CA 3rd, Kaufer D, Werker JF, Kolb B, et al. Critical period regulation across multiple timescales. Proc Natl Acad Sci U S A 2020; 117:23242-23251. [CrossRef]
7. Resmî Gazete. Türkiye Cumhuriyeti Başbakanlık. Çocuk Koruma Kanunu 2005 (Kanun No. 5395). Available at: https://www.resmigazete.gov.tr/eskiler/2005/07/20050715-1.htm. Accessed June 5, 2026. [in Turkish]
8. Güller B, Yaylacı F. Socio-demographic and clinical characteristics of children and adolescents followed for court-mandated treatment. Turkish Journal of Child and Adolescent Mental Health 2022; 29:67-74. [CrossRef]
9. Karakuş Ö, Tekin HH. Çocuk koruma kanunu uyarınca haklarında danışmanlık tedbiri uygulanan çocukların özellikleri (Konya örneği). Sosyal Politika Çalışmaları Dergisi. 2012; 7:29-44. [Article in Turkish]
10. Duman NS, Gokten ES, Efe A, Buyukuysal C. The evaluation of children referred for health measure ruling according to the child protection law. Eur Res J 2016; 2:121-125. [CrossRef]
11. Kardaş Ö, Gümüşsoy AS, Benk Ayaz AM, Kardaş B, Çimen İD. Sağlık tedbiri kapsamında değerlendirilen ergenlerde madde kullanımı ile ilişkili faktörler. The Bulletin of Legal Medicine 2023; 28:259-266. [Article in Turkish] [CrossRef]
12. Kul M, Dağ P, Akdağ B, Canoğulları Kul G. Sağlık tedbiri uygulaması kapsamında takip edilen çocuk ve ergenlerin psikososyal değerlendirme sonuçları. The Bulletin of Legal Medicine 2023; 28:267-272. [Article in Turkish] [CrossRef]
13. Karadağ F, Kolbüken YÇ. Sağlık tedbiri karari bulunan çocuklarin koruyucu/önleyici hizmetler kapsaminda değerlendirilmesi. Tıbbi Sosyal Hizmet Dergisi 2022:86-102. [Article in Turkish] [CrossRef]
14. Bronsard G, Alessandrini M, Fond G, Loundou A, Auquier P, Tordjman S, et al. The prevalence of mental disorders among children and adolescents in the child welfare system: a systematic review and meta-analysis. Medicine (Baltimore) 2016;95:e2622. [CrossRef]
15. Kolaitis G. Trauma and post-traumatic stress disorder in children and adolescents. Eur J Psychotraumatol 2017; 8(Suppl. 4):1351198. [CrossRef]
16. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (DSM-5). 5th ed. Arlington (VA): American Psychiatric Publishing; 2013. [CrossRef]
17. Monette S, Long MC, O'Leary A, Cyr C, Terradas MM, Couture S. Mental disorder diagnoses and symptoms and functional impairment in school-age children in the care of child protective services. Child Abuse Negl 2025; 159:107155. [CrossRef]
18. Barican JL, Yung D, Schwartz C, Zheng Y, Georgiades K, Waddell C. Prevalence of childhood mental disorders in high-income countries: a systematic review and meta-analysis to inform policymaking. Evid Based Ment Health 2022; 25:36-44. [CrossRef]
19. Sacco R, Camilleri N, Eberhardt J, Umla-Runge K, Newbury-Birch D. A systematic review and meta-analysis on the prevalence of mental disorders among children and adolescents in Europe. Eur Child Adolesc Psychiatry 2024; 33:2877-2894. [CrossRef]
20. Calvo N, Lugo-Marín J, Oriol M, Pérez-Galbarro C, Restoy D, Ramos-Quiroga JA, et al. Childhood maltreatment and non-suicidal self-injury in adolescent population: A systematic review and meta-analysis. Child Abuse Negl 2024;157:107048. [CrossRef]
21. Chia AYY, Hartanto A, Wan TS, Teo SSM, Sim L, Kasturiratna KTAS. The impact of childhood sexual, physical and emotional abuse and neglect on suicidal behavior and non-suicidal self-injury: A systematic review of meta-analyses. Psychiatry Research Communications. 2025; 5:100202. [CrossRef]
22. Puno A, Kim J, Bhatia A, Jeong J, Kim R. Violence against children, self-harm, and suicidal behaviors: a pooled and country-specific analysis of eight low- and middle-ıncome countries. J Adolesc Health 2024; 75:60-68. [CrossRef]
23. Serafini G, Canepa G, Adavastro G, Nebbia J, Belvederi Murri M, Erbuto D, et al. The relationship between childhood maltreatment and non-suicidal self-ınjury: a systematic review. Front Psychiatry 2017; 8:149. [CrossRef]
24. Yue Y, Wang Y, Yang R, Zhu F, Yang X, Lu X, et al. Gender difference in the associations of childhood maltreatment and non-suicidal self-injury among adolescents with mood disorders. Front Psychiatry 2023; 14:1162450. [CrossRef]

25. Ernst M, Brähler E, Kampling H, Kruse J, Fegert JM, Plener PL, et al. Is the end in the beginning? Child maltreatment increases the risk of non-suicidal self-injury and suicide attempts through impaired personality functioning. Child Abuse Negl 2022; 133:105870. [CrossRef]

26. Bourne SV, Korom M, Dozier M. Consequences of ınadequate caregiving for children's attachment, neurobiological development, and adaptive functioning. Clin Child Fam Psychol Rev 2022; 25:166-181. [CrossRef]

27. McLaughlin KA, Sheridan MA, Nelson CA. Neglect as a violation of species-expectant experience: neurodevelopmental consequences. Biol Psychiatry. 2017;82:462-471. [CrossRef]

28. Rakesh D, McLaughlin KA, Sheridan M, Humphreys KL, Rosen ML. Environmental contributions to cognitive development: the role of cognitive stimulation. Developmental Review 2024; 73:101135. [CrossRef]

29. Sheridan MA, Mukerji CE, Wade M, Humphreys KL, Garrisi K, Goel S, et al. Early deprivation alters structural brain development from middle childhood to adolescence. Sci Adv 2022; 8:eabn4316. [CrossRef]

30. Humphreys KL, Zeanah CH. Deviations from the expectable environment in early childhood and emerging psychopathology. Neuropsychopharmacology 2015; 40:154-170. [CrossRef]

31. Akdag B. Evaluation of children under health measure from the perspective of child psychiatry: a district sample. Current Perspectives in Social Sciences 2023;27:152-159. [CrossRef]

32. Nelson CA 3rd, Gabard-Durnam LJ. Early adversity and critical periods: neurodevelopmental consequences of violating the expectable environment. Trends Neurosci 2020; 43:133-143. [CrossRef]

33. Schär S, Mürner-Lavanchy I, Schmidt SJ, Koenig J, Kaess M. Child maltreatment and hypothalamic-pituitary-adrenal axis functioning: A systematic review and meta-analysis. Front Neuroendocrinol 2022; 66:100987. [CrossRef]

34. van Bodegom M, Homberg JR, Henckens MJAG. Modulation of the hypothalamic-pituitary-adrenal axis by early life stress exposure. Front Cell Neurosci 2017; 11:87. [CrossRef]

35. Sahin F, Cepik-Kuruoğlu A, Demirel B, Akar T, Duyan-Camurdan A, Iseri E, et al. Six-year experience of a hospital-based child protection team in Turkey. Turk J Pediatr 2009; 51:336-343.

36. Jozefiak T, Kayed NS, Rimehaug T, Wormdal AK, Brubakk AM, Wichstrøm L. Prevalence and comorbidity of mental disorders among adolescents living in residential youth care. Eur Child Adolesc Psychiatry 2016; 25:33-47. [CrossRef]