

## Nutritional Disorders in Juvenile Offenders: Risk Factors, Effects, and Proposed Solutions

Suçta Sürüklenen Çocuklarda Beslenme Bozuklukları: Risk Faktörleri, Etkileri ve Çözüm Önerileri

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### ÖZET

Suçta sürüklenen çocuklar, yoksulluk, aile içi şiddet, ihmal, eğitim eksiklikleri ve akran etkisi gibi sosyoekonomik ve psikolojik risk faktörleri etkisiyle erken yaşta suçla tanışmaktadır. Benzer risk faktörleri beslenme sağlığını da etkisi altına alarak suçta sürüklenen çocuklarda yeme bozukluklarına neden olmaktadır. Yetersiz ve dengesiz beslenme nedeniyle bu çocukların fiziksel, zihinsel ve duygusal gelişimleri sağlıklı bir biçimde tamamlanamamaktadır. Beslenme bozukluğuyla gelişen obezite veya vitamin ve mineral eksiklikleri gibi sorunlar, çocukların fiziksel ve zihinsel gelişimini olumsuz etkileyerek psikososyal sorunları çoğaltmaktadır. Ruhsal ve sosyal problemler ise çocuklarda suçta eğilimi tırmandırarak başlı başına bir risk faktörü olmakta ve bir kısır döngü yaratmaktadır. Bu nedenle suçta sürüklenen çocukların rehabilitasyonu ve topluma yeniden kazandırılması için adli tıp uzmanları, psikiyatristler, psikologlar, sosyal hizmet uzmanları ve aile terapistlerinin yanında beslenme sağlığını izlemek ve sorunlarla mücadelede katkı sağlamak amacıyla diyetisyenlerin de yer aldığı multidisipliner bir yaklaşım gerekmektedir. Suçta sürüklenmiş bu hassas durumdaki çocukların beslenme davranışları incelenmeli, zararlı beslenme alışkanlıkları düzeltilmeli ve psikolojik destek sağlanmalıdır. Ayrıca aile ve okul desteği ile birlikte beslenme programlarının yaygınlaştırılması ve toplumsal farkındalığın artırılması oldukça önemli hale gelmektedir. Sonuç olarak, suçta sürüklenen çocukların beslenme sağlığı, yalnızca bireysel değil, toplumsal bir sorun olarak ele alınmalıdır. Sosyal hizmet uzmanlarının raporları doğrultusunda ihtiyaç duyan ailelerin tespit edilip ulaşılarak gerekli rehberliğin sağlanması, devlet politikalarına suçta sürüklenmiş çocuklar için sağlıklı gıda erişiminin kolaylaştırılmasına yönelik programların eklenmesi ve bireysel ile toplumsal beslenme bilincinin artırılması gerekmektedir. Bu anlatı derlemesi kapsamında suçta sürüklenen çocuklarda beslenmeyi etkileyebilecek risk faktörleri, bozukluklarının ruhsal ve fiziksel etkileri ve bu hassas grupta görülebilecek beslenme problemlerine ilişkin çözüm önerileri ele alınmıştır. **Anahtar Kelimeler:** Suçta Sürüklenen Çocuklar, İstismar, İhmal, Psikolojik Travmalar, Yeme Davranışı

### ABSTRACT

Children who have been pushed into crime are introduced to criminal activities at an early age due to socioeconomic and psychological risk factors such as poverty, domestic violence, neglect, lack of education, and peer influence. These same risk factors also affect their nutritional health, leading to eating disorders in children involved in crime. Inadequate and unbalanced nutrition prevents these children from achieving healthy physical, mental, and emotional development. Problems such as obesity or deficiencies in vitamins and minerals resulting from nutritional disorders negatively affect children's physical and mental development, further exacerbating psychosocial issues. Psychological and social problems, in turn, increase the tendency toward crime, becoming a risk factor in themselves and creating a vicious cycle. Therefore, in order to rehabilitate and reintegrate children involved in crime into society, a multidisciplinary approach is required, involving forensic experts, psychiatrists, psychologists, social workers, family therapists, and dietitians to monitor nutritional health and contribute to tackling these issues. The eating behaviors of these vulnerable children should be examined, harmful eating habits corrected, and psychological support provided. Additionally, the widespread implementation of nutrition programs, along with family and school support, and increasing societal awareness is crucial. In conclusion, the nutritional health of children involved in crime should be addressed as a societal issue, not just an individual one. Based on the reports of social service professionals, families in need should be identified and provided with necessary guidance. Programs aimed at facilitating access to healthy food for children involved in crime should be added to state policies, and both individual and societal awareness of nutrition should be increased. In this narrative review, risk factors that may affect nutrition in children dragged into crime, the mental and physical effects of nutritional disorders, and suggestions for solutions to nutritional problems that may be seen in this vulnerable group are discussed. **Keywords:** Children Dragged into Crime, Abuse, Neglect, Psychological Trauma, Eating Disorders.

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**Başvuru/Submitted:** 18.03.2025 **Kabul/Accepted:** 6.07.2025

**Cite this article as:** Depreli, A., Adigüzel E., Çavdar B. Nutritional Disorders in Juvenile Offenders: Risk Factors, Effects, and Proposed Solutions. J TOGU Heal Sci 2026;6(1):409-425.

## **1. INTRODUCTION**

Children involved in delinquency are individuals who encounter criminal behavior at an early age under the influence of individual, familial, and environmental risk factors. In their lives, filled with obstacles, factors such as poverty, neglect, domestic violence, negative peer influence, and misguidance can increase their tendency towards illegal behavior. This may negatively affect their ability to adapt to societal life (1-6).

Poverty, lack of attention, neglect, and other adverse living conditions can restrict children's access to essential nutrients, leading to malnutrition (7). When combined with individual factors such as impulsivity, this situation becomes a significant contributor to increased delinquent behavior among children (6, 8). Therefore, the lack of access to proper nutrition can be considered one of the negative outcomes that exacerbate tendencies toward crime. This process creates a reinforcing vicious cycle. In addition, over time, this exacerbates behavioral and psychosocial issues, further increasing the tendency toward delinquency (2, 9-13).

The literature indicates that low socioeconomic status and unhealthy family conditions, such as parental loss and disengaged family structures, are key risk factors that drive children toward delinquency. Children raised in such conditions face disadvantages in many nutritional processes, from receiving breast milk at birth to transitioning to solid foods, which can negatively affect their nutritional health. In particular, the inability to ensure regular breast milk intake and a proper transition to solid foods in the early stages of life can have long-term adverse effects on both physical and psychological development (14-16).

In children involved in delinquency, excessive eating behavior may occur in cases of an inability to cope with stress, along with familial risk factors. It is observed that cases of childhood obesity, caused by stress and eating crises, should not be overlooked in the struggle against juvenile delinquency (17). The literature includes examples of studies that demonstrate a direct link between the presence of physical violence within the family and eating disorders (18).

Inadequate and unbalanced nutrition not only has individual effects on children but can also lead to serious consequences at the societal level. When the effects on individuals are reflected across the general population, it can negatively impact public health, increase the

economic burden on the state, lead to failures in educational policies, and raise the demand for healthcare services (19-22).

Physical and mental development disorders can limit the workforce potential of society in the long term. Therefore, it is essential for both the state and society to raise awareness about healthy nutrition among children in economically and socially disadvantaged groups across the country (5, 6, 20, 23). This review aims to raise awareness about nutritional health in children involved in crime, examine the effects of inadequate and unbalanced nutrition, and develop recommendations to prevent these negative effects.

## **2. CHILD DELINQUENCY**

### **2.1. Legal and International Definitions of the Concept of a Child**

The concept of a child, although subject to different regulations in national and international legislation, generally refers to individuals under the age of 18. The World Health Organization defines a child as an individual between the ages of 0 and 18 (24). Similarly, according to the United Nations Convention on the Rights of the Child (CRC), every individual who has not yet reached the age of 18 is considered a child. The Council of Europe and European Union regulations also adopt this age limit and implement measures to protect and promote children's rights (25-27).

### **2.2. Definition of a Child and Legal Legislation in Turkey**

In Turkey, the legal definition of a child encompasses individuals who have not yet attained the age of 18. The Turkish legal system has established specific provisions aimed at ensuring the protection and development of children (28,29). In Turkish legal terminology, the concept of a child is defined by the Child Protection Law. In this context, individuals who have not yet reached the age of 18 are considered children (Juvenile Protection Law. Official Gazette dated 15 July 2005 and numbered 25876. Republic of Turkey; 2005). The Turkish Penal Code also classifies individuals under the age of 18 as children and states that they will be subject to special considerations in terms of criminal liability (Turkish Penal Code. Law No: 5237, Official Gazette Date: October 12, 2004, Issue: 25669. Republic of Turkey).

### **2.3. The Concept of Child Delinquency**

The Turkish Penal Code and the Child Protection Law have positioned children differently within the scope of criminal law. For children who commit offenses, the term 'offender child' is avoided, and the expression 'child in conflict with the law' is adopted. This

approach is based on the understanding that children should be rehabilitated and reintegrated into society rather than being punished (28, 29).

In this context, both international and national legal frameworks have adopted a common understanding for the protection and development of children's rights. From a criminal law perspective, this also presents a protective and supportive approach (26).

#### **2.4. Risk Factors Affecting the Process of Children's Involvement in Criminal Offenses**

Child Delinquency represents one of the most vulnerable groups in society. Social, economic, and psychological factors influence the process of delinquency. Domestic violence, neglect, indifference, inadequate educational opportunities, economic difficulties, and negative peer groups are potential risk factors that may lead children to encounter crime at an early age. Crime becomes a reflection of these difficulties, leading to serious consequences both individually and socially. Therefore, the rehabilitation and reintegration of children involved in delinquency should be viewed not only as an individual issue but also as a collective responsibility of society (2, 30-34).

Family issues and neglect are among the primary causes of delinquency. The family is the first social environment for children. However, conditions such as domestic violence, neglect, and alcohol or substance abuse can negatively affect children's emotional and psychological development. A history of crime and imprisonment within the family may normalize crime for children. Children who do not receive adequate love and attention from their family tend to seek this deficiency in their surroundings, which can lead to forming bad friendships and habits. This situation creates a foundation for children to turn to delinquency (30, 35, 36).

Difficulties in education are one of the significant risk factors for children involved in delinquency. Education plays a critical role in the healthy development of children. However, inadequacies in educational opportunities and peer bullying can lead to children distancing themselves from school. Failure in education can cause children to lose hope for their future and, at times, see crime as an escape route (2, 30, 37).

Social environment and peer influence play a decisive role in children's involvement in delinquency. The impact of peer groups on children is particularly strong during adolescence. Weak family bonds and deficiencies in the social environment can lead children to harmful peer

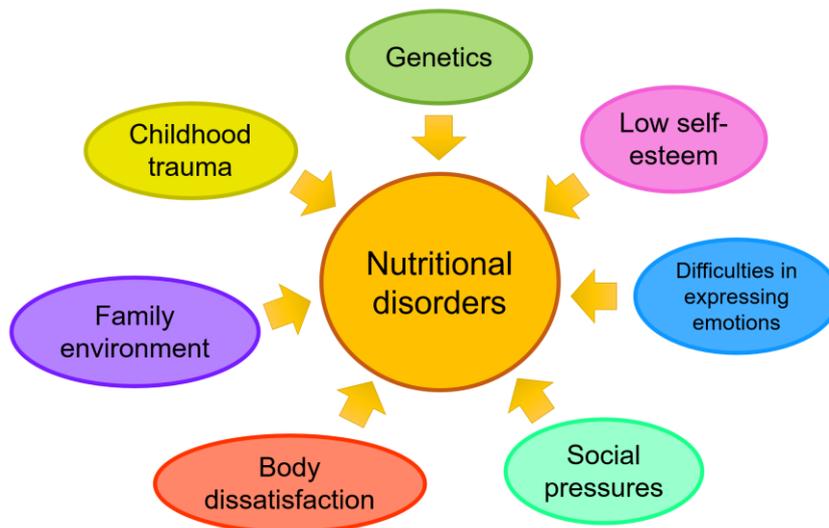
groups, and peer pressure can cause young people to exhibit delinquent behavior. This process facilitates children's entry into the world of crime (1, 2, 30).

Economic difficulties are another significant risk factor for children involved in delinquency. Poverty, particularly in large cities, can encourage children to engage in criminal activities. Financial hardships can prevent children from meeting their basic needs and lead them to view crime as a solution. This situation is more commonly observed in economically disadvantaged areas and contributes to an increase in crime rates (2, 30, 38).

Child delinquency not only affects the children themselves but also negatively impacts society as a whole. The increase in crime rates creates a sense of insecurity within the community and lowers the quality of life. Therefore, early exposure to crime during childhood is also a societal and public health issue (6, 38).

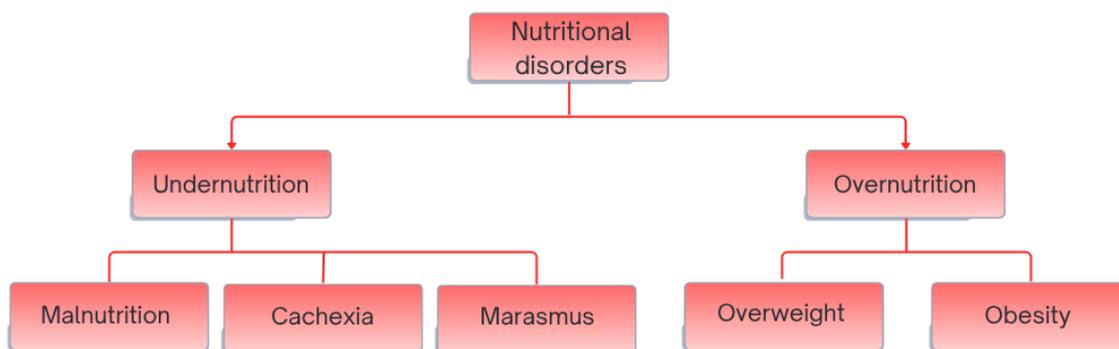
### 3. CHILDHOOD NUTRITIONAL DISORDERS AND EFFECTIVE RISK FACTORS

Childhood is one of the periods of rapid physical and mental development. During this process, healthy nutrition is crucial not only for growth and development but also for building resistance against diseases. Nutritional disorders are one of the most important determinants of healthy physical and mental growth and development in children (12, 39-42). These disorders may have a genetic origin or be caused by low self-esteem, difficulties in expressing emotions, body dissatisfaction, social pressures, family environment, and childhood trauma (Figure 1) (43).



**Figure 1.** Main factors affecting nutritional disorders

Nutritional disorders can be primarily categorized into two groups: undernutrition and overnutrition (Figure 2). Protein-energy malnutrition, resulting from inadequate protein and energy intake, can lead to severe conditions such as cachexia (extreme emaciation) or marasmus. Specific micronutrient deficiencies, such as those in iron, zinc, iodine, and vitamins, can negatively affect children's immune systems, as well as their mental and physical development (17). On the other hand, overnutrition can be examined under two headings: overweight and obesity. The World Health Organization defines BMI greater than  $25 \text{ kg/m}^2$  as being overweight and greater than  $30 \text{ kg/m}^2$  as obesity (44). Obesity, which results from excessive calorie intake coupled with low physical activity, has become an increasingly prevalent health issue in childhood in recent years. Moreover, adolescents may exhibit overeating behaviors in response to adverse life conditions and unmanaged stress (17). Excessive weight, in turn, predisposes individuals to cardiovascular and metabolic diseases at an early age, while also creating a foundation for the development of psychosocial problems due to distortions in body image (41, 42).



**Figure 2.** Classification of nutritional disorders

One of the issues of childhood undernutrition, selective eating disorder, is characterized by children rejecting certain foods and eating from a limited food range. This disorder typically arises due to reasons such as sensory sensitivities, psychological factors, or traumatic experiences. Some children may refuse to consume certain foods due to excessive sensitivity to the texture, color, smell, or taste of foods. Stress, anxiety, or negative past eating experiences can also trigger this condition. Selective eating disorder can lead to health issues in children, such as undernutrition, vitamin and mineral deficiencies, growth retardation, weakened immune system, and anemia. Furthermore, it may cause social interaction problems, such as disharmony during family meals, difficulty during meal times at school, and exclusion by peers (1, 13).

Schools and educational institutions, family and peer networks, media, advertisements, the living environment, government policies, cultural norms, healthcare services, and the food industry are key environmental factors influencing childhood nutrition disorders. Although nutrition programs in schools are subject to state supervision, the food options available in school cafeterias can negatively affect healthy eating. The availability of sports activities in schools also can directly impact children's calorie requirements and dietary patterns (45, 46). Indeed, Thivel et al (46) reported that breakfast consumption was associated with aerobic fitness and lower extremity strength in a study conducted on 278 French school children. In the same study, it was also stated that snack consumption negatively affected Squat Jump performance.

One of the fundamental risk factors influencing the development of childhood nutrition disorders is the family. In addition to unchangeable factors such as genetic predispositions, there are numerous studies in the literature on familial factors, such as parental attitudes, which influence nutrition. Parents' unhealthy eating habits and attitudes toward nutrition can affect children's food choices and eating patterns. Familial risk factors also include genetic predispositions. For instance, a family history of anorexia or bulimia nervosa can increase the risk of children developing such disorders. Socioeconomic status of the family and domestic psychology are other factors affecting eating habits (2, 13, 42, 47). Izydorczyk et al. (12) reported that resilience was negatively associated with emotional and external eating, which are unhealthy eating attitudes. Additionally, parents' permissive or authoritarian attitudes can have a direct impact on the child's eating behavior. The presence of physical violence within the family has been suggested to be directly associated with eating disorders. In a study of 319 university students, it was reported that both direct exposure to domestic violence and witnessing domestic violence were associated with eating disorder symptoms regardless of gender (18).

Peer influence is one of the factors that affects the social and psychological development of individuals during childhood and adolescence. Social acceptance and approval are particularly important during adolescence. The eating habits and dominant behaviors of influential individuals within peer groups can impact the eating behaviors of children. Dominant individuals play a decisive role over group members, shaping group norms from activity preferences to meal times and contents, and influencing the behaviors of others. When combined with factors such as parental indifference, lack of awareness regarding the child's social circle, socioeconomic status, and the child's introverted psychosocial condition, peer

influence can have a more pronounced and intensive shaping effect on children's eating behaviors (1, 2, 13, 46, 49).

The urban or rural nature of the area in which individuals live can significantly affect their eating habits and overall health. In urban areas, children may develop unhealthy eating habits due to easy access to fast-food restaurants and processed foods. In rural areas, greater access to fresh and organic foods can support healthier eating habits. However, the limited food variety in rural areas can lead to a monotonous diet. In urban areas, intense social interactions and consumption of ready-made food can increase susceptibility to health issues such as obesity and diabetes. On the other hand, in rural areas, homemade meals and local products can provide a healthier eating pattern. Nevertheless, both lifestyles have both positive and negative effects on nutrition. Therefore, it is crucial to consider environmental factors in promoting healthy eating habits for children, and to encourage access to healthy food through cooperation between families, educators, and healthcare professionals (42, 49-51).

#### **4. NUTRITIONAL DISORDERS IN CHILD DELINQUENCY**

Children involved in delinquency are often influenced by a range of factors, including adverse sociocultural conditions, family issues, psychological trauma, and peer influence. These factors not only contribute to the children's engagement in criminal activities but also lead to significant disruptions in their nutritional health. Particularly, situations such as low socioeconomic status, domestic violence, parental substance abuse, and social exclusion can negatively impact both the psychological and physical health of children. These conditions hinder the development of healthy eating habits, thereby creating a foundation for nutritional disorders (1, 2, 13, 52).

Domestic violence and poverty are two of the most common issues faced by children involved in delinquency. Conflicts and unsafe environments within the family can disrupt children's emotional stability, adversely affecting their eating behaviors. Poverty, on the other hand, prevents children from accessing adequate and balanced nutrition. This situation can lead to a preference for low-cost yet nutritionally poor foods, such as fast-food and processed items. Such eating habits can hinder children's physical development and contribute to chronic health problems like obesity and diabetes (42, 43, 52).

Psychological trauma is another significant factor that deeply affects the eating habits of children involved in delinquency. Traumatic experiences, such as domestic violence, sexual abuse, or social exclusion, may lead children to use eating behaviors as a coping mechanism.

This can create a foundation for the development of serious eating disorders, such as anorexia nervosa, bulimia nervosa, or binge eating disorder. Children may confuse emotional hunger with physical hunger, leading to the development of unhealthy eating behaviors (53-57).

Peer influence plays a significant role, particularly during adolescence, in both the involvement of children in delinquency and the deterioration of their eating habits. Children involved in delinquency are often part of peer groups that are exposed to similar negative circumstances. Within these groups, unhealthy eating habits may be prevalent, and children may be influenced by their peers to engage in the consumption of fast-food or junk food. Additionally, behaviors such as substance abuse within peer groups can also negatively impact children's eating patterns (1, 52, 58, 59).

The adverse sociocultural conditions experienced by children involved in delinquency are often accompanied by not only nutritional disorders but also emotional and psychological issues. These children typically struggle with psychological problems such as anxiety, depression, and low self-esteem. This situation further negatively impacts their eating behaviors, creating a vicious cycle. For instance, depression may lead to overeating or loss of appetite, and these behaviors can, in turn, exacerbate the child's psychological condition (2, 13, 41, 60).

Numerous studies in the literature, both past and present, have documented the presence of substance abuse in children involved in delinquency (61-65). It has been noted that substance use reduces appetite and leads individuals to consume unhealthy foods (66). In the rehabilitation efforts of delinquent children, particularly those with a history of substance use, nutritional health should be carefully reviewed and addressed.

The prevention and treatment of nutritional disorders in children involved in delinquency requires a multidisciplinary approach. In this process, nutritionists, psychologists, social workers, and family therapists should work together. Early intervention is crucial in correcting children's eating habits and supporting their psychological health. Additionally, improving family dynamics can provide children with a healthier environment, reducing both the risk of delinquency and the incidence of nutritional disorders (13, 47, 67).

## **5. NUTRITIONAL DISORDERS INTERVENTION AND REHABILITATION PROCESSES FOR CHILDREN IN CHILD DELINQUENCY**

### **5.1. The Role of Nutrition Education and Social Integration in Children Involved in Child Delinquency**

Children involved in child delinquency face not only physical and psychological issues but also challenges related to educational deficiencies and social integration. Education plays a critical role in helping children develop as healthy individuals within society, and it can be a significant factor in steering these children away from criminal behavior. However, deficiencies in the education system, bullying in schools, and social exclusion can contribute to children disengaging from education and turning to delinquency. Therefore, strengthening educational and social integration processes is of paramount importance for the rehabilitation and reintegration of children involved in delinquency into society (68-70).

Education is one of the most important tools that shapes children's hopes for the future and helps them become productive members of society. However, children involved in delinquency often face negative conditions such as deficiencies in the education system and bullying in schools. This situation can lead to children disengaging from school and becoming involved in crime. Failure in education can cause children to lose confidence in themselves and view crime as a way out. Therefore, improving the education system and encouraging children to stay in school is a crucial step in reducing the risk of delinquency (68-70).

Children involved in delinquency often face social exclusion and prejudice. This makes it difficult for them to reintegrate into society and increases their tendency to engage in criminal behavior. Strengthening social integration processes can help these children gain acceptance within society and develop in a healthy manner. Raising social awareness, reducing prejudice against delinquent children, and facilitating their reintegration into society are crucial steps in ensuring their rehabilitation (71-73).

A series of measures can be taken to support the education and social integration processes of children involved in delinquency. Increasing the availability of counseling and psychological services in schools can help address the emotional and psychological needs of these children. Additionally, implementing anti-bullying programs in schools can ensure that children have a safe educational environment. At the societal level, awareness-raising campaigns targeted at delinquent children and organizing educational programs can facilitate their reintegration into society (13, 74, 75).

## **5.2. Psychological Support and Rehabilitation Processes on Nutrition in Children Involved in Delinquency**

Children involved in delinquency not only face physical and nutritional issues but also struggle with severe psychological trauma. Psychological support and rehabilitation processes are crucial in helping these children overcome their traumas and reintegrate into society (1, 13, 76). Traumas disrupt children's emotional balance, leading to psychological issues such as anxiety, depression, anger management problems, and low self-esteem. Additionally, these children may also face serious psychiatric conditions such as post-traumatic stress disorder (PTSD). These psychological issues can increase the likelihood of delinquent behavior and complicate rehabilitation processes (76, 77).

Psychological support for delinquent children is a critical step in helping them overcome their traumas and reintegrate into society in a healthy way. Individual therapy, group therapy, and family therapy can be effective methods in addressing their emotional and psychological needs. Specifically, trauma-focused cognitive behavioral therapy (CBT) can assist children in coping with traumatic experiences and changing negative thought patterns. Additionally, creative therapy methods such as art therapy and play therapy can facilitate the expression of emotions in children (78-81).

The family plays a key role in the rehabilitation process of children. Improving family dynamics can provide a safe and supportive environment for children to grow, thereby reducing the risk of delinquency. Family therapy can strengthen communication among family members, helping to meet the emotional needs of the children. Additionally, active participation of families in the children's psychological support processes can enhance the success of rehabilitation (82).

The reintegration of delinquent children into society requires not only individual and familial efforts but also societal support and rehabilitation programs. Rehabilitation centers supported by the government, psychological counseling services, and educational programs can help these children regain hope for their future. Additionally, raising awareness in the community and reducing prejudices towards delinquent children can facilitate their reintegration into society (83-86).

## 6. CONCLUSION AND RECOMMENDATIONS

Children are affected by a variety of factors, such as adverse sociocultural conditions, familial problems, psychological trauma, and peer influence. As a result, they become involved in criminal behavior and their nutritional health is significantly impaired. Due to inadequate and imbalanced nutrition, these children are unable to achieve healthy physical, mental, and emotional development, which further exacerbates their inclination toward delinquency. Nutritional disorders can result in health issues such as stunted growth, weakened immune systems, and anemia, while also contributing to long-term effects such as obesity, diabetes, and psychosocial problems. Therefore, interventions targeting the nutritional health of delinquent children are crucial not only for individual health but also for societal welfare and crime prevention.

A multidisciplinary approach should be adopted to address this issue. Nutritionists, psychologists, social workers, and family therapists should collaborate to not only improve the children's nutritional habits but also provide psychological and social support. Early intervention programs are crucial in encouraging children to develop healthy eating habits, while improving family dynamics and minimizing negative environmental factors are equally important. Additionally, strategies such as promoting healthy eating programs in schools, offering healthy food options in cafeterias, and utilizing peer influence in a positive manner can be effective steps to protect children's nutritional health.

Consequently, the nutritional health of children involved in delinquency should be addressed not only as an individual issue but also as a societal one. Government policies should be structured to facilitate access to healthy food and provide support to low-income families. Educational programs aimed at increasing nutritional awareness should be widespread in society. Raising awareness and supporting families can ensure that children grow up in a healthy environment, thereby reducing both the risk of delinquency and nutritional disorders. This comprehensive approach will contribute to the physical, mental, and emotional development of children, helping to raise healthier and more productive individuals for the future of society.

**Financial Support:** This research did not receive any financial support from public, commercial, or non-profit sector funding organizations.

**Conflict of Interest:** The authors declare that they have no conflict of interest.

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