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Mental problems and sociodemographic characteristics in children driven to committing crimes and the preparation of forensic reports

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ABSTRACT

Objective: In children referred for forensic reports by juvenile courts, particularly as psychosexual maturation starts in the initial phases of adolescence, actions defined as criminal by society may be expected to have been committed. These actions, which are frequently the results of unconscious impulses and sometimes affectations, are crimes in the general sense for this reason; great care is required when determining the presence of the ability of children to perceive the legal meaning and consequences of crimes that they commit and their ability to channel their behaviors. The aim of this present study is to examine the mental problems in children driven to committing crimes and the preparation of forensic reports in a Turkish forensic sample.

Methods: Children referred by courts to Van Regional Training and Research Hospital Outpatient Clinics of Pediatric Psychiatry between 2013 and 2014 for forensic expert reports evaluating their ability to perceive the legal meaning and consequences of criminal behavior, and their ability to control their behaviors. Seventy-four children were evaluated retrospectively, with interviews of approximately 45 minutes on The Diagnostic and Statistical Manual of Mental Disorders in order to determine psychiatric diagnosis.

Results: After evaluations, 26% of children and adolescents were found to possess the ability to perceive the legal meaning and consequences of the crime they had committed and have the ability to control their behaviors, while 27% could perceive the legal meaning and consequences but could not control their behavior, and 47% did not have the ability to perceive the legal meaning and consequences of the crime they had committed and to control their behaviors.

Conclusions: The ability to perceive the meaning and consequences of crime and to direct one's behaviors are affected by pathologies related with the family and the child.

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Child and adolescent;
delinquent behavior; child
delinquency; psychiatric
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Introduction

Childhood crimes comprise serious public health problems that place an emotional and economic burden on the society. The period of adolescence between childhood and adulthood is a time of rapid growth, development and maturation, when biological, psychological, cognitive and social changes take place. During this transition period, conflicts between different roles, attitudes and relationship patterns adopted by the adolescent may result in the occurrence of adaptation problems. When negative familial or environmental factors are added to these issues, criminal behavior may be observed in adolescents. Many studies have shown adolescence to be the time period when people are most frequently driven to criminal behaviors [1]. Adolescents showing harmful behaviors are reported to carry a high risk of mental and physical problems, unemployment and relationship issues once they reach adulthood [2]. Studies from many different countries show a sharp increase in the frequency of committing crimes in the

first years of adolescence, and a sharp decline starting between the age of 20 through the early 30s [3]. In a longitudinal study by Moffitt, only 5–10% of individuals at high risk who showed serious behavioral problems in childhood were found to commit behaviors legally defined as crime in adulthood [4].

Fairchild et al. investigated risk factors related to personality, genetics and neurobiology that drive children and adolescents to crime. Emotional and behavioral problems, alcohol and other chemical addiction and familial characteristics were found to be important risk factors [5]. Familial factors are known to have a very strong effect on positive and negative behaviors of children. Studies have reported that relationships between parents and children play an important role in childhood crimes [6]. In studies that investigated families of children driven to crime, more intra-familial violence (spouse abuse, child abuse, elderly abuse, physical and emotional abuse), weaker mother–father relationships and insufficient intra-familial communications were

reported, along with children's negative perceptions of mothers and fathers for various reasons [7].

Meanwhile, in another study, the probability of committing petty crimes such as alcohol intake in public places, damage to others' property, attempted or actual theft, use of counterfeit papers or throwing stones or bottles among children who experienced supportive and encouraging behaviors from their families were found to be lower than children without such familial support [8].

According to the Criminal Law of the Republic of Turkey (TCK) regulations, children below age 13 when they commit a crime cannot have criminal responsibility. Criminal prosecution of these children is not permitted, though precautions appropriate for children may be administered. Individuals between 13 and 15 years old when they commit an action are not criminally responsible if they cannot perceive the legal meaning and consequences of that action or do not possess sufficient ability to channel their behaviors, but again precautions appropriate for children may be administered to these individuals. If an individual in this age group possesses the ability to perceive the legal meaning and consequences of that action and the ability to control his or her behaviors related to that action, age-specific punishment may be administered [9].

Children referred for forensic reports were evaluated in this study in order to determine risk factors for criminal behavior. The nature and pattern of crimes, behaviors and attitudes before, during and after the crime, self-defense justifications and witness statements that their cognitive functions were not sufficiently developed and conditions where they were not able to perceive the meaning and consequences of their crimes were all considered in this evaluation.

Patients and methods

The sample contains 74 children referred in 2013 and 2014 by courts to Van Regional Training and Research Hospital's outpatient pediatric psychiatry clinic for forensic expert reports that evaluated their ability to perceive the legal meaning and consequences of criminal behavior and their ability to control their behaviors. Sociodemographic data, previous mental disorder diagnosis and developmental histories of these children were evaluated retrospectively, with interviews of approximately 45 minutes on DSM-5 in order to determine axis I diagnosis. TCK is taken as the basis for determining the age range. Those whose required data were missing and those who were referred to other centers were excluded from the study.

Procedure

Permission from and cooperation of village reeves was obtained. This study was approved by the Ethics Committee of Sakarya University.

Statistical analysis

Descriptive statistics were presented as means, standard deviations (SD), frequencies (*n*) and percentages (%). Chi-square tests were used in the evaluation of the effects of sociodemographic, demographic and other characteristics of these children on their criminal competency status. Variance analyses were carried out in order to evaluate the effect of participants' parents on their competency status. *P* values <0.05 were considered statistically significant in the analysis. The analysis was carried out with SPSS 22.0 software.

Social and demographic data of the children

The mean age of children and adolescents included in this study was 13.81 (± 1.28) years; 42% were in the 12- to 14-year-old age group, while 58% were between 15 and 17 years old. 91.9% were males and 8.1% were females. 41.9% (*n* = 31) were not attending school (Table 1).

After forensic evaluations, 26% of children and adolescents were found to possess the ability to perceive the legal meaning and consequences of the crime they had committed and the ability to control their behaviors, while 27% could perceive the legal meaning and consequences but could not control their behaviors and 47% had neither the ability to perceive the legal meaning and consequences of the crime they had committed nor control over their behaviors (Table 2).

Twenty-three percent of the children and adolescents who were evaluated did not receive a psychiatric diagnosis. The distribution of diagnoses of the 77% of patients who were diagnosed as having at least one

Table 1. Demographic characteristics of the study group.

	Number	Percentage
<i>Age group</i>		
12–14	31	41.9
15–17	43	58.1
<i>Forensic suggestion</i>		
Taken under protection	23	31.1
Health precaution	51	68.9
<i>Gender</i>		
Male	68	91.9
Female	6	8.1
<i>Left school</i>		
Yes	31	41.9
No	43	58.1
<i>Number of children in the family</i>		
1–5	1–5	1–5
6 <	6 <	6 <
<i>Family status</i>		
Intact	62	83.8
Not intact	12	16.2
<i>Father's employment status</i>		
Unemployed	7	9.5
Working	67	90.5
<i>Mental disorder in mother</i>		
Present	7	9.5
Absent	67	90.5
<i>Mental disorder in father</i>		
Present	7	9.5
Absent	67	90.5

Table 2. Crime and criminal responsibility status.

Crime		Competence status		
		Possess the ability to perceive the legal meaning and consequences of crime and to control their behaviors	Possess the ability to perceive the legal meaning and consequences of crime, but cannot control their behaviors	Do not possess the ability to perceive the legal meaning and consequences of crime and cannot control their behaviors
Theft	Number	9	5	14
	Percentage	32.1	17.9	50.0
Homicide	Number	1	1	0
	Percentage	50.0	50.0	0.0
Damage to property	Number	6	6	11
	Percentage	26.1	26.1	47.8
Substance Possession	Number	1	0	0
	Percentage	100.0	0.0	0.0
Assault	Number	0	4	3
	Percentage	0.0	57.1	42.9
Aiding and abetting an organization	Number	0	0	2
	Percentage	0.0	0.0	100.0
Insult	Number	1	1	2
	Percentage	25.0	25.0	50.0
Selling cigarettes	Number	0	1	0
	Percentage	0.0	100.0	0.0
Sexual abuse	Number	1	1	2
	Percentage	25.0	25.0	50.0
Fraud in official papers	Number	0	2	0
	Percentage	0.0	100.0	0.0

psychiatric disorder according to DSM-5 diagnostic criteria were as follows: 1% post-traumatic stress disorder (PTSD), 4% depression, 5% anxiety, 16% behavioral (disorder, 3% impulse control disorder, 12% attention-deficit hyperactivity disorder (ADHD), 14% ADHD and behavioral disorder, 3% substance addiction, 3% obsessive-compulsive disorder, 7% ADHD and anxiety disorder, 3% mood disorder and behavioral disorder. The distributions of the forensic psychiatric DSM-5 diagnoses of the children are presented in Table 3.

Determination of variables that affect legal competency status

Chi-square (X^2) analysis was used to detect any effects of sociodemographic characteristics of the children on legal competency. The presence of a mental illness in the mother (mental health status) was found to have an effect on legal competency status ($X^2 = 8.23$, $p < 0.05$).

Table 3. Distribution of diagnosis.

Diagnosis	Number	Percentage
No diagnosis	17	23.0
PTSD	1	1.4
Depression	3	4.1
Anxiety	4	5.4
Behavioral disorder	12	16.2
Impulse control deficiency	2	2.7
Mental retardation	5	6.8
ADHD	9	12.2
ADHD and behavioral disorder	10	13.5
Substance addiction	2	2.7
OCD	2	2.7
ADHD and anxiety disorder	5	6.8
Mood disorder and behavioral disorder	2	2.7

Note: PTSD, post-traumatic stress disorder; ADHD, attention-deficit/hyperactivity disorder; OCD, obsessive-compulsive disorder.

Chi-square test (X^2) analysis was also used to detect any effects of age on legal competency status. In this analysis, children between the ages of 15 and 17 more frequently had the ability to perceive the meaning and consequences of crime and to control their behaviors ($X^2 = 9.88$, $p < 0.05$; see Table 4).

Discussion

It is important to determine whether and how children and adolescents who are involved in crime should stand trial, which rules should be used in assessment of these individuals and how they can be integrated back into society. It is also crucial to detect the factors effective in driving children and adolescents into criminal behaviors and study measures that will prevent those behaviors [10].

Crime and violence are terms that are frequently used together. Both congenital, biological and physiological causes and emotional, social and close environmental factors are believed to be responsible for the origin of both phenomena. Investigations have found family structure and support, unemployment, poverty, environment, education system, mental problems and attitudes to crime to be important factors in adolescent criminal behaviors [11].

Risk factors that could cause children to commit crimes were investigated in this study, and the psychiatric diagnoses of these children were determined. Studies have reported higher rates of crime in males [12]. In this study, 92% of the 77 cases driven to crime were male. In addition to biological features of boys, higher rates of exposure to intra-familial physical violence and having greater opportunities to be in social environments in which criminal associations can increase the risk of committing

Table 4. Age and criminal competency.

Age group	Juvenile criminal competency			χ^2	P
		Possess the ability to perceive the meaning and consequences of crime and to control their behaviors	Possess the ability to perceive the meaning and consequences of crime but cannot control their behaviors	Do not possess the ability to perceive the meaning and consequences of crime and cannot control their behaviors	
12–14	Number	6	7	18	9.88 0.01
	Percentage	19.4	22.6	58.1	
15–17	Number	13	13	17	
	Percentage	30.2	30.2	39.5	

crimes [13]. Although detention of girls has decreased due to a general decrease in juvenile detentions between 1994 and 1999, the frequency of detention of girls for major crime categories has increased [14]. In a 1997 study by Hastings and Hamberger, the mean age of committing a crime was 14 [15]. The mean age in our study was similarly 13.81 (± 1.28) years of age; 42% were in the 12- to 14-year age group.

Homelessness is a larger problem in Latin America, where the types of crimes committed reflect the problems of living on the streets. While crimes against property are prominent in developed countries, violence and addictive drug crimes are increasing in frequency [16]. According to the Turkish Institute of Statistics, 115,439 children were taken into custody by Turkish police in 2013. Approximately three quarters of these children ($n = 102,350$) were between 15 and 17 years old, and 8397 were males. The distribution of crimes were assault ($n = 42,540$), theft ($n = 33,038$) and damage to property ($n = 6,640$) [17]. Among cases referred to the pediatric psychiatry department at Van Regional Training and Research Hospital, the most common behaviors were theft (38%) and damage to property (31%).

The number of children standing trial for assault is higher in Turkey as a whole than for our cohort; the reason for this may be regional differences in the distribution of crimes. In a study by Bilgin et al., assault was the most frequent at 50% of cases, followed by theft. Their study was also conducted with children referred for forensic evaluation of criminal competency, but in a different region of Turkey [18].

In nearly all studies recently carried out in developed countries, largely in the U.S., an increase in crime rates, most frequently theft, has been reported [19]. In a study by Wasserman et al. of 991 adolescents under probation, 80% of the sample was male [20]. In a Northwestern Juvenile Project study involving 1829 male and female adolescents aged from 10 to 18 years at the Cook County Juvenile Temporary Detention Center, approximately 90% of all detainees were males, a similar percentage as all child detainees in the U.S. [21]. When the gender distribution in the present study (males = 68, females = 6) is compared with all children in Turkey taken into police custody are considered (males = 102,350, females = 13,089) and being convicted (males = 5967, females = 165), the

male gender is seen as an important risk factor for juvenile delinquency [17].

The importance of family in raising children is well known, but some particular features of the family appear to be important in the context of children driven to crime. Whether the family is intact and its socioeconomic and cultural levels shape a child's first social experiences and can play an important role in the development of character. Also, strict or lax attitudes, parental behaviors regarding the child, showing or not showing respect and helping or not helping during adolescence are all very important [22]. Continual quarrels between the parents, the presence of intra-familial violence and the use of alcohol or other substances can all produce negative effects on children [22]. Limited or lost familial control of children enables easier relations between children and the criminal element and facilitates an orientation towards crime. The presence of criminal individuals in the family is important both in terms of modeling, teaching inappropriate social values and determining the overall environment in which the children are raised [10]. The U.S. Department of Health and Human Services has defined child neglect as inability or insensitivity of the person responsible for the care of a child to meet the requirements for that child's development, including health, education, emotional nurturing, nutrition, sheltering and safe living conditions. Parents or other caregivers should provide a living space in proportion with the resources that they possess [23]. In the large-scale Ontario Child Health Study from Canada, which was carried out with 3300 children aged 4–16 years, the risk of having children with behavioral disorders and substance addiction was found to be higher in families with only one parent [24]. In a meta-analysis of 161 studies, family behaviors in general were found to be the most important determinant for crimes committed during adolescence [25]. In a study from the U.S., 25% of children who had committed crimes were found to be from non-intact families, crime rates were found to be significantly higher in children from such families and the general importance of family integrity was emphasized [26]. In a study from Istanbul University's Institute of Criminal Law and Criminology of 974 delinquent children, 42.1% were found to be members of non-intact families. In a study by Semerci et al. on children aged 8–12 years in a criminal children rehabilitation center,

45% of 52 children were from families with divorced parents and 12% had lost a mother or father [17]. In the present study, 16.2% ($n = 13$) of the children were found to be members of non-intact families, while 9.5% ($n = 7$) of mothers and fathers had a mental disorder (Table 1). Mental disorders of the mother or father are known to cause disruptions in relationships with children, while at the same time causing a loss of control and effect of the family on children. In the present study, 18.9% of children ($n = 14$) were found to be exposed to intra-familial violence. Being exposed to violence inside or outside the family environment may cause a perception of normalization of violence in children, a perception that it is an acceptable mode of behavior and the use of violence by children themselves. Moreover, weak family discipline, inability of children to control their behaviors and parental errors in controlling appropriate social interactions and behaviors increase the risk of violence [27]. Evaluation of families, detection of their inadequacies, developing family support programs and raising children in a safe environment away from dysfunctional families may help prevent adolescent crimes.

School is the next important institution after family in directing the social behaviors of children [28]. The attitude of school administration and friends that children make at school are important for criminal behaviors [29]. Crime and violence complicate children's remaining in the education system and continuing their schooling. At the same time, it is easier for children who encounter difficulties in continuing their education to change directions towards violence and criminal or near-criminal behaviors [30]. It was reported that low school success may be an indicator for criminal behaviors. Their investigations support the view that academic problems increase behavioral problems, problems which may lead to further lack of discipline and direct students away from academic education [30]. These factors were also reported to be the most important factors in leaving school. In the study by the last school year that the cases had completed was the eighth grade [18]. In the study by Nicol et al., approximately two thirds of adolescents had left school for good, and a significant number of them had inadequate education, reaching only level of literacy [31].

Among children and adolescents included in the present study, 41.9% were no longer attending school. It is harder to control children outside the school system. Along with interventions meant to eliminate risk at school, the cooperation of schools, families and other institutions can provide positive outcomes. Determining risks with children in school is much easier than with those who have left the educational system. In order to determine risks, schools should have guidance systems that work well. Having adequate numbers of guidance teachers, creating a file for each

child, obtaining information not only on children creating problems but also on all children and regular interviews with children will help enable determine at-risk youngsters. For those found to be at risk, individual support, family interviews and impressions, help from other institutions if needed and social support programs for children if needed can all play important roles in these precautions [29].

Many studies have investigated the frequency of mental problems among juveniles with criminal records. At least 50–70% of children driven to crime were reported to have at least one psychiatric disorder, while the rate is only between 9% and 21% in the general adolescent population [32]. In a study by Teplin et al. on adolescents aged 10–18 years from different ethnic groups in custody, 1829 children were evaluated; psychiatric disorders were detected in 63.3% of males and 71.2% of females, rates that are three to four times higher than samples from the general population [33]. In the U.S., one or more psychiatric disorders were detected in 65–75% of child and adolescent criminals [34]. This increases the risk of suicide and being harmed by physical assault or accident in convicted children and adolescents. The most frequently seen psychiatric disorders seen in children and adolescents driven to crime are as follows: behavioral disorder, ADHD, PTSD, depression, anxiety and mental retardation. Studies have shown that ADHD, behavioral disorder and substance use at an early age are important determinants of harmful behaviors and crime [33]. In Turkey, in an investigation by Semerci et al. on 52 criminal children, behavioral disorder was found in 69.2% of cases and ADHD in 40.4%, with depression also present in 9.6% of those having ADHD and comorbidities in general reported to be high [35]. In the present study, 79.7% of children were diagnosed with at least one psychiatric disorder. Comorbidity of ADHD and behavior disorder was seen in 16.2% and behavior disorder alone was seen in 14.9%. Our study supports the fact that psychiatric disorders and comorbidities are important factors in criminal behaviors. All these investigations show the importance of educating the family and schools on psychiatric disorders that may predispose children to crime and of providing the required resources to assist children in at-risk groups.

Pediatrics welfare services have an important place in the mental health system of children. Child welfare systems provide financial support for children and adolescents in the context of supporting the health of the poor. In addition, children and adolescents in particular enter this system for conditions that cause psychiatric problems and due to child abuse, neglect and criminal behavior risk [36]. Exposure of these children to risk factors that result in trauma or exclusion makes them a group that requires early intervention by society. Based on other investigators' results in this

field, child welfare systems are considered an early treatment system for children who are at risk of engaging in criminal activity during adolescence and showing behavioral concerns. When forensic reports were prepared for the children included in the present study, state protection was recommended for 31.1% and health precautions after court verdicts for state officials were recommended for 68.9%.

In evaluating children in terms of legal competency, the key question is whether they have incomplete perceptions of the importance and consequences of their behaviors before committing a crime [37]. Generally, age is of considerable importance's a marker of the maturity of an individual. There are many important incidents in Western societies reflecting this concept: the age at which a driving license is permissible, the age to vote in elections and the age for alcohol consumption are all examples. In systems in which the age of 18 is considered the age of majority, individuals who commit a crime at that age or older are accepted as fully grown and functioning persons who can defend themselves in court. In recent years in the juvenile law systems of some countries, changes have taken place or have been proposed to lower the age threshold of legal competency, especially for crimes such as homicide [38]. While age is important in determining normal development, it does not account for the wide variability in the developmental process [39]. Children do not possess complex ideations in making decisions, which may sometimes cause harmful and dangerous behaviors.

It is generally accepted that children and adolescents should be evaluated differently in the context of maturity and age of legal competency rather than being included in adult legal systems. In Don Cipriani's comprehensive study on legal competency maturity, it was shown that only 19 of 200 countries had a lower limit for the age of punishment [39]. In some instances, a minor error by a child who is slightly older than the legal competency limit may be considered a crime, a philosophy known as "adult crime, adult time" [39]. Advocates of this opinion claim that serious crimes like sexual crimes should be defined as adult crimes as these are not childish behaviors [39]. The developmental processes of children and adolescents are different from each other. Brain development continues in adolescence and even during early adulthood. The prefrontal region, which has particular responsibility for basic functions such as reasoning, judgment, decision and interpretation, has not completed its development as adolescence is left behind. This affects the ability of children and adolescents to perceive the meaning and importance of crime control their behaviors and understand the consequences. In an article on this relationship, two U.S. Supreme Court verdicts were cited as examples [40]. The court concluded that a 17-year-old adolescent who was found guilty of

homicide and sentenced to capital punishment and another 16-year-old adolescent who was sentenced to life for armed robbery were deemed victims of cruel and unusual punishment. Judge Kennedy based his opinions on findings from neuroscience and noted the fact that adolescents had insufficient maturity and responsibility in comparison with adults, and that there were many sociological and scientific investigations showing that the adolescent period is a phase when imprudent behaviors are commonly seen. Scientific investigations may help provide answers to questions about the evaluation of legal competency, especially in adolescence [40].

Juvenile crime is an issue that concerns all sections of society. Risk factors should be determined for each child in order to try to prevent juvenile crimes. As with many other studies, we found family problems, family breakup, being male, the inability to continue education and the individual pathologies of the child, especially behavioral disorders and ADHD, as the most important risk factors for childhood crimes. When these risks are detected in advance, they may be decreased by means of interventions. Support for and interventions in families, prevention efforts in schools and early treatment of psychiatric disorders that are associated with childhood crime will be effective [41]. In the effort to steer children away from crime and guide them back to general society, the relationship between crime and risk factors must not be forgotten. There is a general public interest regarding the decision phase of prosecution of crime that has developed independent of the choices of the individual, but rewarding good deeds in earlier phase's yields better outcomes than punishment. It encourages thinking before doing the right thing [42]. Standing trial and facing punishment by children who become involved with crime in spite of efforts at detection of risk factors and prevention do not solve problems, but only exacerbate them. Children who already have problems are more likely to become criminals with even more problems after prison. Documentation of having the ability to perceive the meaning and consequences of crime and to direct their behaviors by a physician's forensic report should not automatically mean that the child should be punished.

Disclosure statement

No potential conflict of interest was reported by the authors.

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