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Forensic psychiatric evaluation of criminal responsibility: A retrospective study

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Abstract

The study aimed to analyze the sociodemographic and clinical characteristics of individuals referred for criminal responsibility (CR) assessment, to determine the factors affecting CR, and to discuss the findings in light of the existing literature. Forensic reports of adult cases (n=360) evaluated between 01.01.2018 and 31.12.2022 at Karabük Forensic Medicine Branch Directorate were retrospectively reviewed. After applying exclusion criteria, 301 cases were included, corresponding to 434 criminal acts. Sociodemographic variables, psychiatric diagnoses, psychiatric service admissions, self-mutilation, suicide attempts, and substance use history were analyzed. Logistic regression was performed to determine predictors of CR. Of the 434 offenses, 78.8% were judged to have full CR, while 21.2% were considered to have diminished or no responsibility. Male predominance was notable (84.4%), with a mean age of 35.9 years. Logistic regression showed that psychiatric disorders, absence of substance use, and living with parents were the strongest predictors of CR assessment (Nagelkerke $R^2=0.796$, overall accuracy=94.9%). Psychiatric diagnoses, intellectual disability, substance use, and social functioning factors are crucial determinants in CR assessments. The findings underline the necessity of a multidimensional medico-legal approach that incorporates psychiatric history, functional capacity, and contextual variables, rather than relying solely on diagnoses.

Keywords: Forensic psychiatry, criminal responsibility, mental disorders, psychopathology

Introduction

In criminal law, the fundamental purpose of punishment is to deter the commission of offenses, to prevent recidivism by offenders, and to ensure the protection of public order [1]. Criminal responsibility (CR) refers to whether an individual possesses the capacity to comprehend the legal meaning and consequences of an act, and the ability to direct and control such conduct [2]. The concept of CR, as regulated in Article 32 of the Turkish Penal Code, is evaluated according to whether the individual has psychiatric diagnosis such as mental illness, intellectual disability, or psychotic disorders, and the extent to which these conditions affect the person's behavior at the time of the offense [3]. CR may be classified as full, diminished, or absent, and this evaluation serves as a direct determinant of legal liability.

The assessment of CR requires a multidisciplinary approach. In practices in Türkiye, medical evaluations jointly conducted by forensic medicine and psychiatry specialists play a critical

role. This assessment process necessitates the simultaneous consideration of multiple factors, including the individual's clinical history, psychiatric diagnosis, cognitive functions, social life, and behavioral patterns. Within this framework, two essential evaluations must be made: whether the person was able to comprehend the legal meaning and consequences of the alleged act, and whether they possessed the capacity to control their behavior at the time of the offense [4].

Studies in the international literature on CR assessments indicate that clinical conditions such as psychosis, bipolar disorder, intellectual disability, and substance use may influence CR [5,6]. In addition, empirical research has shown that impairments in social functioning and interpersonal behavioral processes can also act as mitigating or influential factors in the evaluation of CR [7].

Considering these medico-legal complexities, evaluating CR requires an integrated understanding of psychiatric history, functional capacity, behavioral patterns, and contextual variables

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rather than relying solely on diagnostic labels. Previous studies have emphasized that both clinical and social factors may significantly influence CR decisions, yet the relative contribution of these variables varies across jurisdictions and clinical settings. In Türkiye, the need for systematically examining the interplay between sociodemographic features, clinical characteristics, and offense-related variables remains particularly important for improving the consistency and quality of forensic assessments. Therefore, this study aims to analyze the sociodemographic and clinical characteristics of individuals referred for CR evaluation and to identify the factors that significantly influence CR determinations in light of current medico-legal literature.

Material and Methods

Forensic expert reports of adult cases (>18 years) evaluated for CR between January 1, 2018, and December 31, 2022, in the archives of the Karabük Forensic Medicine Branch Directorate were retrospectively reviewed (n=360). Cases in which a definitive opinion regarding CR could not be established and were referred to the higher board, as well as those ordered to be placed under observation, were excluded from the study (n=59). After applying these exclusion criteria, a total of 301 cases were included in the final analysis.

In the center where the study was conducted, assessments of CR were performed through a standardized multidisciplinary procedure in which forensic medicine and psychiatry specialists jointly evaluated a wide range of variables. These included neuropsychiatric diagnoses, treatment history, suicide attempts, hospitalization records, and other clinical data, as well as sociodemographic and contextual factors such as educational level, sociocultural background, alcohol and substance use, the type of offense, and the manner in which the act was committed. This institutional approach constituted the basis for the data structure reviewed in the present study.

All sociodemographic, clinical, and offense-related variables included in the analyses were extracted from forensic psychiatric reports and categorized as follows: gender (female/male), marital status (single, married, divorced/widowed), educational level (no formal education, primary-school dropout, primary-school graduate, secondary-school graduate, high school graduate, university graduate), residence (with parents, with spouse/children, alone, prison, other relatives, or other settings), employment status (employed/unemployed), military service status (completed, incomplete, not served—evaluated only for males), and number of siblings (only child, 2–3 siblings, ≥4 siblings). Clinical variables included psychiatric diagnosis (healthy, psychotic disorder, mood disorder, mild–borderline intellectual disability, moderate–severe intellectual disability, neurological disorder), history of psychiatric outpatient visit, psychiatric hospitalization, self-mutilation, suicide attempt, smoking, alcohol use, and illicit substance use (each coded as yes/no).

Psychiatric diagnoses were not reclassified for the purposes of this study; instead, they were taken directly from the forensic

psychiatric reports, where they had been established during the original clinical evaluations by forensic medicine and psychiatry specialists in accordance with DSM-5 diagnostic criteria, using patient history, case-file information, and, when necessary, collateral information obtained at the time of the original evaluation, consistent with the retrospective design of this study.

Offense types were classified according to the Turkish Penal Code into intentional injury, insult, threat, theft, sexual offenses, property damage, deprivation of liberty, violation of domicile, robbery, intentional homicide, and other offenses (which included tax law violations, military offenses, possession of prohibited items, disturbing public peace, document forgery, fabricating crimes, drug trafficking, arson, terrorist propaganda, traffic endangerment under influence of substance, membership in a terrorist organization, slander, illegal logging, and facilitation of prostitution). CR was coded dichotomously as full versus diminished/absent responsibility.

Continuous variables were presented as mean±standard deviation, and categorical variables were expressed as numbers and percentages. Since the forensic reports specified whether CR was full, diminished, or absent for each offense separately, statistical analyses were performed based on the number of offenses (n=434). The dependent variable was categorized into two groups—‘full CR’ and ‘diminished or absent CR’—and a logistic regression model was constructed to evaluate the effects of sociodemographic, psychiatric, and behavioral variables on CR.

Statistical analyses were performed using SPSS (Statistical Package for the Social Sciences) version 21.0. A significance level of $p < 0.05$ was accepted within a 95% confidence interval.

The study was approved by the Non Interventional Clinical Research Ethics Committee of Karabük University on 28.07.2025 and was assigned the number 2025/2433.

Result

It was observed that a total of 434 offenses committed by 301 individuals included in the study were evaluated in terms of CR. Of the cases, 84.4% (n=254) were male, with a mean age of 35.92 (±13.1) years. Prior to referral for forensic assessment, 56.1% of the individuals had a psychiatric and/or neurological diagnosis, 67.8% had a history of psychiatric consultation, and 24.9% had a history of psychiatric hospitalization. The detailed sociodemographic and clinical characteristics of the cases are presented in Table 1.

In 78.8% of the cases (n=342), full CR was determined, whereas in 21.2% (n=92), CR was found to be diminished or absent. When the relationship between the type of offense and CR was examined, it was observed that among cases with full responsibility, 18.4% were related to intentional injury, 15.2% to insult, and 13.2% to theft. In contrast, among those with diminished or absent CR, intentional injury was the most common offense (29.3%), followed by threat (16.3%) and insult (15.2%) (Table 2).

Table 1. Sociodemographic and clinical characteristics of the cases

Sociodemographic Characteristics			Clinical Characteristics		
Variables	Groups	n (%)	Variables	Groups	n (%)
Gender	Female	47 (15.6)	Smoking	No	55 (18.3)
	Male	254 (84.4)		Yes	246 (81.7)
Military Servicea	Not served	92 (36.2)	Alcohol use	No	161 (53.5)
	Incomplete	36 (14.2)		Yes	140 (46.5)
	Completed	126 (49.6)	Substance abuse	No	206 (68.4)
Residence	Parents	104 (34.6)		Yes	95 (31.6)
	Spouse/children	92 (30.6)	Psychiatric outpatient visit	No	97 (32.2)
	Alone	48 (15.9)		Yes	204 (67.8)
	Prison	48 (15.9)	Psychiatric inpatient stay	No	226 (75.1)
	Other relatives ^b	4 (1.3)		Yes	75 (24.9)
	Other ^c	5 (1.7)	Suicide attempt	No	276 (91.7)
				Yes	25 (8.3)
Education Level	No formal education	22 (7.3)	Self mutilation	No	205 (68.1)
	Primary-School dropout	21 (7.0)		Yes	96 (31.9)
	Primary-School	108 (35.9)	Diagnosis	Healthy	132 (43.9)
	Secondary-School	77 (25.6)		Psychotic disorder	37 (12.3)
	High School	55 (18.3)		Mood disorder	60 (19.9)
	University	18 (6.0)		Mild-borderline ID	58 (19.3)
Marital Status	Married	111 (36.9)		Moderate-Severe ID	7 (2.3)
	Divorced/widowed	47 (15.6)		Neurological disorder	7 (2.3)
	Single	143 (47.5)			
Having Children	Yes	131 (43.5)			
	No	170 (56.5)			

a: Only male cases were included, b: Uncle, maternal uncle, grandfather, c: Military, nursing home, friend, ID: intellectual disability

Table 2. Relationship between types of offenses and criminal responsibility

Type of Offence	Full Criminal Responsibility n (%) ^a	Diminished/Absent Criminal Responsibility n (%) ^a	Total
Intentional injury	63 (18.4)	27 (29.3)	90 (20.7)
Insult	52 (15.2)	14 (15.2)	66 (15.2)
Theft	45 (13.2)	3 (3.3)	48 (11.1)
Threat	41 (12)	15 (16.3)	56 (12.9)
Property damage	31 (9.1)	7 (7.6)	38 (8.8)
Sexual abuse	26 (7.6)	11 (12)	37 (8.5)
Deprivation of liberty	10 (2.9)	-	10 (2.3)
Violation of domicile	8 (2.3)	-	8 (1.8)
Robbery	5 (1.5)	1 (1.1)	6 (1.4)
Intentional homicide	5 (1.5)	-	5 (1.2)
Other*	56 (16.4)	14 (15.2)	70 (16.1)
Total	342 (100)	92 (100)	434 (100)

a Column percentages are provided, *: ‘Other’ offenses include violation of tax laws, military code offenses, possession of prohibited items, disturbing public peace, forgery of official documents, fabricating crimes, drug trafficking, arson, terrorist propaganda, endangering traffic safety under the influence of substances, membership in a terrorist organization, slander, illegal logging, and facilitation or encouragement of prostitution

Table 3. Effects of various variables on the assessment of criminal responsibility

Variable	B	S.E.	p	OR (Exp(B))	95% CI Lower	95% CI Upper
Age (>65^a)						
50–64	18.303	8886.727	0.998	8.893E+07 ^d	-	-
35–49	18.639	8886.727	0.998	1.244E+08 ^d	-	-
18–34	16.625	8886.727	0.999	1.660E+07 ^d	-	-
Gender (Female^a)						
Male	0.407	0.788	0.605	1.502	0.321	7.042
Education (University^a)						
High school	-0.800	1.007	0.427	0.449	0.062	3.235
Secondary school	-1.118	1.097	0.308	0.327	0.038	2.808
Primary school	-0.621	0.942	0.510	0.538	0.085	3.406
Primary dropout	-0.641	1.400	0.647	0.527	0.034	8.188
No formal education	2.432	1.304	0.062	11.377	0.883	146.589
Employment (Employed^a)						
Unemployed	0.618	0.595	0.299	1.856	0.578	5.955
Number of sibling (Only child^a)						
2–3 siblings	-3.267	1.181	0.006	0.038	0.004	0.386
≥4 siblings	-1.675	1.111	0.132	0.187	0.021	1.653
Marital status (Married^a)						
Divorced/widowed	-2.503	1.701	0.141	0.082	0.003	2.296
Single	-1.125	1.725	0.514	0.325	0.011	9.550
Having children (No^a)						
Yes	0.054	0.893	0.951	1.056	0.183	6.076
Residence (Living alone^a)						
Parents	3.210	0.954	0.001	24.783	3.817	160.910
Spouse/children	-1.047	1.566	0.504	0.351	0.016	7.550
Prison	-18.083	3207.561	0.996	0.000 ^d	-	-
Other relatives ^b	7.662	10.395	0.461	2125.54	0.000	1.498E+12
Other ^c	3.598	1.749	0.040	36.511	1.186	1.124E+03
Psychiatric diagnosis (Healthy^a)						
Psychotic disorder	5.640	1.171	0.000	281.583	28.361	2.796E+03
Mood disorder	3.622	1.110	0.001	37.415	4.251	3.292E+02
Mild-borderline ID	4.074	1.146	0.000	58.782	6.217	5.557E+02
Moderate-Severe ID	26.776	9036.495	0.998	4.251E+11 ^d	-	-
Neurological disorder	4.576	1.571	0.004	97.163	4.470	2.112E+03
Smoking (Yes^a)						
No	1.393	0.611	0.023	4.026	1.216	13.330
Alcohol use (Yes^a)						
No	-0.034	0.737	0.963	0.966	0.228	4.096
Substance abuse (Yes^a)						
No	5.967	1.967	0.002	390.415	8.262	1.844E+04
Psychiatric outpatient visit (No^a)						
Yes	2.100	0.795	0.008	8.169	1.719	38.821
Psychiatric inpatient stay (No^a)						
Yes	2.009	0.853	0.018	7.455	1.401	39.656
History of suicide attempt (No^a)						
Yes	2.658	0.928	0.004	14.267	2.315	87.904
Self-mutilation (Yes^a)						
No	0.595	0.902	0.510	1.812	0.309	10.619

a Reference category, b Uncle, maternal uncle, grandfather, c Military, nursing home, friend, d Complete separation was observed in the analysis, ID: intellectual disability, OR: Odds Ratio; CI: Confidence Interval, p<0.05 was considered statistically significant

A logistic regression model was constructed to evaluate the effects of sociodemographic, psychiatric, and behavioral variables on CR. The dependent variable, CR status, was categorized into two groups: 'full CR' and 'diminished or absent CR.' The reference category in the model was defined as 'full CR.'

The Nagelkerke R^2 value for the overall model fit was 0.796, indicating that the model explained 79.6% of the variance in the dependent variable. The model correctly classified 94.9% of the cases. Multicollinearity diagnostics revealed that all variables had VIF values below 5, suggesting that no multicollinearity problem existed and that the regression coefficients were reliable for interpretation.

Variables that made a statistically significant contribution to the model included having 2–3 siblings, living with parents, having a psychiatric diagnosis, a history of psychiatric consultation, psychiatric hospitalization, smoking, a history of illicit substance use, and a history of suicide attempt (Table 3).

A complete separation was observed between the dependent variable and certain predictors, as all individuals over 65 years of age ($n=16$) and all those referred from prison ($n=71$) were classified as having full CR, while all individuals diagnosed with moderate to severe intellectual disability were classified as having no CR (Table 3).

In the evaluation of CR, the presence of psychosis, mood disorder, mild or moderate-to-severe intellectual disability, and neurological disorders were identified as key determinants associated with diminished or absent CR. No statistically significant relationship was found between military service status and CR ($\chi^2=0.349$, $p=0.840$). Since military service status was evaluated only in male cases, it was not included in the logistic regression model.

Discussion

Sociodemographic Characteristics

When the demographic characteristics of the cases evaluated for CR in our study were examined, the majority were male (84.4%). National and international studies have similarly reported that more than 70–80% of individuals assessed for CR are men [8–10]. In line with our findings, a recent cross-national study by Kaggwa et al. reported that 86.1% of forensic psychiatric patients were male, further supporting the predominance of men in CR evaluations [11]. This predominance may be attributed to men's greater tendency toward criminal behavior, their higher representation among perpetrators of violent crimes, and the influence of biological factors such as hormonal differences. In addition, personality traits that increase susceptibility to offending and risk factors such as substance use are observed more frequently in men [12–15]. The mean age of the participants in our study was 35.9 years. A similar study conducted in the same region reported that 76.1% of the cases were under the age of 50 [16]. These findings indicate that forensic cases are predominantly concentrated in the young and middle-aged adult population.

In our study, 47.5% of the individuals had never married, 36.9% were married, and 15.6% were divorced or widowed, while 43.5% had children. Large-scale studies conducted in various countries have also reported that individuals with a criminal history have significantly lower marriage rates than the general population, and their likelihood of marrying is lower compared to peers without a criminal record [17–19]. This finding suggests that individuals with psychiatric diagnosis or a history of criminal behavior may face various difficulties in establishing social relationships and forming families, which may limit their rates of marriage and parenthood. Furthermore, weak social support networks, economic difficulties, and recurrent criminal behavior can also be considered as possible factors contributing to this situation.

In our study, 75.8% of the individuals had an educational level of primary school or below (no formal education, primary school dropout, primary school graduate, or secondary school graduate). This rate indicates that individuals with lower educational attainment are evaluated for CR at a considerably higher frequency. Educational level can be regarded as a sociocultural determinant that influences an individual's risk of encountering crime. Low education level has been shown to be associated with both criminal behavior and psychiatric disorders [20,21]. In particular, limited illness awareness, reduced access to healthcare services, and weaker social support mechanisms among individuals with lower education levels may lead to delays in the timely diagnosis and treatment of psychiatric diagnosis that are subject to CR evaluations. This suggests that the impact of low education extends beyond cognitive capacity, indirectly yet significantly influencing social adaptation skills, access to health services, and the risk of engaging in criminal behavior.

Psychiatric History and Clinical Characteristics

In our study, 67.8% of the individuals evaluated for CR had a previous psychiatric consultation, 24.9% had a history of psychiatric inpatient treatment, and 8.3% had attempted suicide at least once. These findings suggest that individuals referred for CR evaluations frequently present with significant psychiatric vulnerability. Similar trends have been reported in international forensic psychiatric populations. For example, Guo et al. found that 21% of forensic psychiatric inpatients in China exhibited elevated suicide risk [22]. Furthermore, a recent cross-national study reported that more than one-third of forensic psychiatric patients had a history of suicide attempt, emphasizing the high-risk nature of this population [23]. Variations in diagnostic composition, referral pathways, and legal frameworks across countries may account for differences in reported rates. Taken together, the literature consistently demonstrates that individuals undergoing forensic psychiatric evaluation constitute a clinically high-risk group, which aligns with the findings of our study.

Notably, 43.9% of the individuals evaluated in our study had no psychiatric or neurological diagnosis prior to referral. This finding indicates that assessments of CR cannot be reduced solely to medical diagnoses; rather, they must be approached

multidimensionally in terms of behavioral, cognitive, and social functioning. In determining CR, not only the existing diagnoses but also the individual's level of awareness, volitional capacity, and patterns of environmental interaction at the time of the offense should be taken into consideration. Moreover, in some cases, individuals may be referred for CR evaluation as part of the defense process—particularly under the guidance of legal counsel—even when they are psychiatrically healthy. Although this may occasionally increase the evaluation workload, it also reflects the structural functioning of the forensic medical system, which safeguards the right to legal defense and the freedom to seek justice.

Among the individuals evaluated for CR, 12.3% were diagnosed with psychotic disorders, 19.9% with mood disorders, and 23.9% with intellectual disabilities ranging from borderline to severe levels. These findings indicate that more than half of the evaluated individuals had a psychiatric or neurological diagnosis. Psychotic disorders, in particular, are among the diagnoses that directly affect CR, as impairments in reality testing may limit an individual's ability to comprehend the legal meaning and consequences of their actions or to control their behavior. In cases of mood disorders, cognitive capacity at the time of the offense may vary depending on the nature of the episode. In individuals with intellectual disability, limitations in cognitive functioning are especially taken into account in legal evaluations concerning partial CR.

The international literature also demonstrates that, in forensic psychiatry populations, the prevalence of psychotic disorders, personality disorders, and neurodevelopmental disorders is particularly high [24]. However, both our study and previous research have shown that inconsistencies may occasionally occur between the psychiatric diagnoses established during forensic evaluations and the individuals' previous clinical psychiatric records [25]. Although psychiatric comorbidities are frequently observed in these cases, they are not present in every instance, and even when present, diagnostic outcomes may vary depending on the scope of the requested forensic evaluation and the standards applied by the referring institution. Therefore, beyond the mere presence of a diagnosis, its impact on the individual's functionality and its contribution to the criminal act should be analyzed comprehensively.

In our study, 46.5% of the individuals evaluated for CR had a history of alcohol use, and 31.6% had a history of substance use. This finding indicates that alcohol and substance use are highly prevalent among individuals referred for forensic assessment. Although the international literature [26,27] suggests that substance use is associated with impulsivity, psychotic symptoms, and behavioral disinhibition—and may therefore act as a factor reducing CR—in general forensic practice, individuals who voluntarily use substances are considered to retain full CR for offenses committed under their influence. Furthermore, the frequent presence of antisocial personality traits among such individuals reinforces the evaluation that their criminal behaviors

are typically deliberate and volitional acts.

Types of Offenses

In our study, apart from intentional injury, the most common types of offenses included theft (11.1%), threat and insult (combined, 28.1%), property damage (8.8%), and sexual abuse (8.5%). These findings indicate that individuals referred for forensic psychiatric evaluation are assessed not only for violent offenses but also for property-related or sexually motivated crimes. Similar patterns have been reported in the international literature: Sun et al. identified intentional injury, threat, and property damage as the most frequent offenses among individuals undergoing CR evaluations [9]. Likewise, a recent study from Türkiye reported that intentional injury, threat, and insult were the most common offenses among cases referred for CR assessment, supporting the consistency of offense distributions across different regions [8].

The relatively high proportion of threat and insult offenses (28.1%) suggests that these individuals often experience significant difficulties with impulse control, anger management, and social interaction—problems that may escalate to a level requiring judicial intervention. Furthermore, 29.7% of sexual abuse cases were among individuals classified as having diminished or absent CR, indicating that such offenses can also occur with considerable frequency among individuals with impaired cognitive functioning.

The finding that property damage occurred at similar rates among individuals with full (9.1%) and diminished/absent (7.6%) CR suggests that this type of offense may emerge independently of psychiatric illness and may instead reflect maladaptive responses to social stress.

The majority of theft cases were observed among individuals with full CR (93.8%), suggesting that these acts may be more deliberate and planned in nature. In particular, most individuals referred for forensic evaluation under the claim of kleptomania were found to be psychiatrically healthy, indicating that such claims are often not considered grounds for diminished responsibility. The literature also highlights that distinguishing kleptomania from ordinary theft is diagnostically complex and controversial; however, when kleptomania is diagnosed, it is recognized as a pathological and involuntary behavior characterized by impaired impulse control [28, 29]. Therefore, in such cases, not only the nature of the act but also the individual's level of impulse control, degree of premeditation, and personal history should be comprehensively evaluated.

These findings underscore that, in forensic medical assessments, the types of offenses should be evaluated not merely in terms of the act itself but also in relation to psychiatric diagnosis, functional capacity, and volitional control.

Key Factors in the Evaluation of Criminal Responsibility

In our study, 21.2% of all evaluated offenses were determined to involve diminished or absent CR. The determination of CR is influenced not only by the type of offense committed

but also by multidimensional factors such as individuals' sociodemographic characteristics, psychiatric history, clinical findings, and history of alcohol or substance use. Therefore, a regression analysis was conducted to identify the variables that most significantly affected CR decisions, and these factors are discussed in detail below.

Sociodemographic Variables: In the regression model established in our study, it was found that having two to three siblings increased the likelihood of possessing full CR (OR=0.038; $p=0.006$), whereas living with one's parents was significantly associated with diminished or absent CR.

The markedly higher likelihood of diminished or absent CR among individuals living with their families in our sample suggests that the relationship between functionality and social dependency should be interpreted with caution in forensic assessments. However, in cultures with strong family ties—such as Turkish society—living with one's family is often normative and may represent emotional closeness or socioeconomic necessity rather than psychological dependency. Therefore, this finding should not be viewed as a direct indicator of impaired autonomy. Instead, it may reflect a complex interaction between cultural norms, social support structures, and individual functioning. While the “diffusion of responsibility” mechanism described in the literature [30, 31] may be relevant in some cases, culturally grounded interpretations are essential to avoid overgeneralization. Forensic evaluations should therefore consider cultural context alongside individual clinical and functional characteristics when interpreting living arrangements in the assessment of CR.

Psychiatric History: In our regression model, previous interactions with the psychiatric system emerged as significant determinants in the evaluation of CR among individuals involved in judicial processes. In our study, individuals with a history of psychiatric inpatient stay were found to have a significantly higher likelihood of diminished or absent CR. Similarly, those with prior psychiatric consultations also showed an increased likelihood of diminished or absent responsibility.

Among the statistically significant variables in our logistic regression model, one of the strongest predictors was the diagnosis of psychotic disorder. Considering the profound impact of psychotic disorders on reality testing and volitional capacity, this finding supports the decisive role of such diagnoses in reducing or eliminating CR. Likewise, mood disorders, mild-borderline intellectual disability, neurological disorders, and a history of suicide attempt also emerged as significant and robust variables in the assessment of CR. These variables meaningfully contribute to the evaluation process as clinical determinants that impair cognitive functioning and behavioral control.

Additionally, the rate of full CR was found to be nearly twice as high among individuals with self-mutilation compared to those without. This finding suggests that self-mutilation is

often associated with antisocial personality traits; however, such personality structures generally do not impair cognitive functioning or reality testing.

Although there has been ongoing debate in the literature regarding the CR of individuals with antisocial personality disorder or pronounced antisocial behavior patterns[32] current evidence emphasizes that the heterogeneity of this group precludes a uniform assessment. Nevertheless, contemporary legal and psychiatric consensus indicates that the presence of antisocial personality disorder or self-mutilation alone does not diminish CR. In most cases, these individuals are considered to possess full responsibility, as they retain the ability to understand the nature and wrongfulness of their actions [33, 34].

These findings demonstrate that a substantial proportion of individuals involved in judicial proceedings have previously undergone psychiatric evaluation or treatment and that a significant number present with serious psychiatric conditions. Psychiatric history provides not only clinical data but also crucial insights into an individual's cognitive and volitional capacities for psychiatrists and forensic medicine experts involved in the assessment of CR.

The high rates of prior psychiatric consultation and hospitalization suggest that many of these individuals have experienced significant impairments in psychological functioning, indicating that the behavior leading to the offense may stem from deficits in cognitive domains such as planning, reality testing, and impulse control. Moreover, a history of suicide attempts reflects not only the severity of the psychiatric diagnosis but also calls for an evaluation of the individual's level of insight, impulse control, and engagement with life.

Therefore, the systematic assessment of clinical background elements—such as psychiatric consultations, hospitalizations, and suicide attempts—provides qualitative depth to the interpretation of CR, extending beyond diagnostic labeling to a more comprehensive understanding of the individual's functional and volitional capacity.

Substance and Alcohol Use: In our logistic regression analysis, when individuals with a history of substance use were taken as the reference group, those without substance use exhibited a significantly higher likelihood of diminished or absent CR ($p=0.002$), which is consistent with established forensic medical assessment practices. This result suggests that the primary factor influencing CR is not merely the pharmacological effects of substances, but rather the broader impairment in overall psychiatric functioning. Similarly, the higher likelihood of diminished or absent CR among individuals who did not smoke ($p=0.023$) may indicate that this group includes individuals with more severe psychiatric conditions.

On the other hand, alcohol and psychoactive substances not only impair cognitive and behavioral control but may also trigger

psychotic symptoms, thereby complicating the assessment of CR. The literature likewise emphasizes that substance use disorders are highly prevalent among forensic psychiatric populations and significantly increase the risk of criminal behavior. Individuals with substance use disorders have been shown to exhibit more unstable lifestyles, more extensive criminal histories, and a greater tendency toward violent behavior [34].

In cases where substance use serves as a primary criminogenic risk factor, the assessment of CR should be conducted with particular caution [35]. Therefore, a history of alcohol and substance use emerges as a crucial clinical variable that must be addressed in a multidimensional manner during evaluations of CR.

Limitations

This study has a retrospective design, and the data were based solely on forensic medical evaluation records. As the diagnoses of the individuals were limited to information obtained from previous clinical documents, potential variations in the diagnostic process could not be considered. In addition, the study utilized data from a single center, which may limit the generalizability of the findings.

Future research should aim to conduct multicenter and prospectively designed studies to allow for a more comprehensive analysis of the factors influencing criminal responsibility assessments. Moreover, in forensic psychiatric evaluation processes, it would be beneficial to systematically incorporate qualitative factors such as social functioning, level of insight, and environmental conditions alongside diagnostic information.

Conclusion

This study demonstrated that variables such as psychiatric diagnoses, substance use, educational level, and social environment can play a determining role in the evaluation of CR. In particular, factors such as psychotic disorders, intellectual disability, and illicit substance use significantly influence CR decisions. The findings highlight the necessity of a multidimensional approach in forensic medical assessments—one that focuses not only on diagnostic labels but also on the individual's functional capacity and the impact of the disorder on the criminal act.

The fact that the medical criteria used in CR evaluations are supported by statistically significant and high odds ratios underscores the decisive role of medical science in judicial decision-making. Furthermore, the logistic regression model established in this study, with an accuracy rate of 94.9% and an explanatory power of 79.6%, demonstrates that these variables possess not only theoretical but also strong quantitative predictive value for the assessment of CR. Overall, these results emphasize the importance of a scientifically grounded, functionality-oriented, and multivariable forensic psychiatric approach in determining legal responsibility.

Conflict of Interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

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Ethical Approval

The study received ethical approval from the Non Interventional Clinical Research Ethics Committee of Karabuk University on (28.07.2025) and was assigned the number (2025/2433).

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