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REVIEW

Intellectual disability: Criminality, assessment and forensic issues☆

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Abstract Intellectual disability is of maximum interest in the forensic field. This review includes an electronic search of articles in English or Spanish registered in the Medline database with the terms FORENS* and INTELLECTUAL DISABILITY in the Title or Abstract, up until January 1, 2018, selecting those that addressed issues related to the condition's historical background and legal consideration, criminality and criminal typology, comorbidity in offenders, risk factors and recidivism, and forensic assessment, excluding articles on treatment or treatment outcomes.

We identified 80 articles that fulfilled criteria for inclusion, which highlighted the special consideration historically given by the law to subjects affected by intellectual disability, their high rates of imprisonment, which discussed their relationship with violence, including sexual violence, which describe high rates of comorbidity with other psychiatric disorders, with discrepancies regarding toxic-related disorders, and lastly which reviewed these subjects' risk factors and recidivism, as well as the forensic assessment methods. We also outline the limitations of the literature review, especially in relation to the research criteria that define intellectual disability.

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PALABRAS CLAVE
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La discapacidad intelectual: criminalidad, evaluación y repercusión en el ámbito forense

Resumen La discapacidad intelectiva resulta del máximo interés en el ámbito forense. La presente revisión comprende la búsqueda electrónica de artículos en inglés o castellano registrados en la base de datos Medline con los términos FORENS* e INTELLECTUAL DISABILITY en el «Título» o «Resumen», hasta el 1 de enero de 2018, seleccionándose aquellos que abordaban cuestiones relativas a los antecedentes históricos y consideración jurídica, la criminalidad y tipología delictiva, la comorbilidad en sujetos que delinquen, los factores de riesgo y reincidencia y la evaluación forense, excluyendo los artículos sobre tratamiento o resultados del mismo.

Se identificaron 80 artículos que cumplían criterios de inclusión, que subrayaban la consideración especial históricamente dispensada por la justicia a los sujetos afectos de discapacidad intelectiva, las elevadas tasas descritas en prisión, discuten su relación con la violencia, incluida la sexual, describen tasas elevadas de comorbilidad con otros trastornos psiquiátricos, con discrepancias respecto a los trastornos relacionados con tóxicos y, por último, repasan los factores de riesgo y la reincidencia en estos sujetos, así como los métodos de evaluación forense de la discapacidad. Asimismo, se explicitan las limitaciones de la bibliografía revisada especialmente en relación con los conceptos que definen la discapacidad intelectiva en investigación.

Introduction

The American Association on Mental Retardation (AAMR) [whose name was changed to the American Association on Intellectual and Developmental Disabilities (AAIDD) in 2007] redefined the old concept of mental retardation; they view the condition as a set of significant limitations in both intellectual function and in adaptive behaviour, including social and conceptual skills and practices.[1] These limitations, together with their appearance before the age of 18 years,[2] should be the criteria used by the courts to assess individuals with intellectual disability (ID). However, forensic assessment of ID and how the courts consider the condition vary considerably.

The characteristics of the subjects with ID that commit crimes, their antisocial behaviours and the possible risk factors in this population are of great interest in the forensic field, as is these subjects' risk of victimisation. The objective of this scientific literature review was to establish the state of information on the most relevant forensic issues of intellectual disability, helping to promote a more integrated assessment of this condition.

Method

An electronic search for articles in English or Spanish in the Medline database was performed using the terms FORENS* and INTELLECTUAL DISABILITY in the ''Title'' or ''Abstract'' up to 1 January 2018. After the titles and abstracts were read, the articles that addressed issues related to intellectual disability in the forensic field were selected; articles focusing on treatment and treatment outcomes were excluded. The references in the articles selected were also reviewed, and articles that might fulfil the inclusion criteria were identified, examining their titles and abstracts to evaluate whether they should be included in our review. From the final sample of articles, the data on legal assessment and consideration of intellectual disability in the forensic field and criminological factors affecting subjects with intellectual disability were extracted.

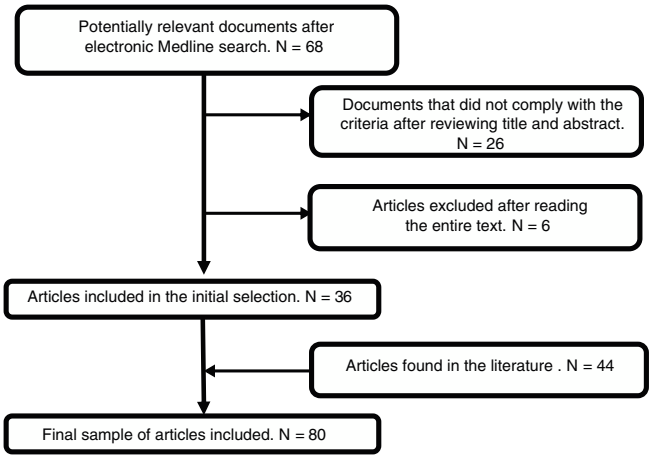

Figure 1 Diagram showing article selection.

Results

There was a total final sample of 80 articles fulfilling the inclusion criteria in this review (Fig. 1). The articles included addressed the historical background and legal consideration of ID, criminality in subjects with ID, risk factors and recidivism and forensic assessment of the condition.

Historical background and legal consideration

On a global level, the law has historically given special consideration to subjects with ID. The United Kingdom Mental Deficiency Act of 1913 took into consideration the possible criminality associated with disability in its classification of mental retardation (that is, ID).[3]

Speaking generally, individuals with ID are accepted as suffering a deterioration in their daily functioning and internal control, which can impact their understanding of social situations and legal aspects.[4] The vulnerability represented by their limited skills in communication and social relationships, their impaired reasoning ability, suggestibility and difficulties in general independent functioning[4–11] can constitute an important factor in committing criminal activities. In turn, this has an impact on court evaluations.

As a condition, ID has been identified as one of the main factors to consider with respect to legal standing.[12] It has also been pointed out that ID and psychotic disorders are the diagnoses most significantly linked to considering the subject to be immune from prosecution.[13] They are likely to be assessed as lacking *mens rea*,[14] exempting them from criminal responsibility penal for their actions, reducing their sentences or establishing security measures.[14–20] Just as has been indicated, this will modify the sentence, and can even be a criterion for excluding the death penalty.[7]

At any rate, in these evaluations it will be essential to establish a causal relationship between committing a crime and the ID diagnosis; in spite of the usual delay between the crime and the evaluation, the subject's mental state at the time that the events occurred should be approached.[21]

The evaluations the courts have traditionally made vary widely, even with respect to the death penalty. In the USA, the Supreme Court determined in 2002 that individuals with ID could not be executed.[2,17,22–24] However, although there are laws attempting to prevent the execution of individuals with ID, the differences in how the criteria of functioning and adaptation are applied and the stereotyped opinions about individuals with ID have caused cases to continue to exist.[25]

Criminality and crime typology in intellectual disability

In the last few years, research related to ID and criminality has risen significantly. However, epidemiological estimates are limited, unclear and sometimes contradictory. Estimating the prevalence of ID in subjects committing crimes is made more complicated because of diagnostic variations and inconsistencies in criminal justice procedures.[7,26–28] In general, high percentages, between 2% and 10%, are mentioned for the prison system.[10,29–31] However, insufficient standardisation in the concept of ID and in how it was assessed makes it impossible to reach conclusions; this is the principal limitation for almost any systematic review in the field of ID.[32] Unfortunately, very few studies assess ID bearing in mind the 3 criteria that define it,[33] and using complete standardised assessments.[28,34]

Individuals with ID generally represent a minority of the delinquent population.[3] Most of them live without committing crimes, socially adjusted[29] and with no evidence as to increased prevalence of delinquency among individuals with ID.[32] In fact, they have been described as having fewer probabilities of being arrested than the general population.[35,36]

However, the fact that they are more easily influenced and manipulated by other people has been pointed out; they are more likely to become scapegoats in criminal situations,[4,7–10,37,38] and there is significantly more ID in the prison population than in the general population.[37] At any rate, this higher prevalence in prison warns us about the risk of underdiagnosis in the subjects with ID that commit crimes and end up in prison, without the criminal justice and treatment that they need.[27,39–42]

Some authors believe that the characteristics and crime typology between subjects that commit crimes with ID and those without ID are very similar.[26,42,43] Other authors subscribe to the opinion that there are specific differences between them.[26,32,42]

Crocker and Hodgins[39] examined the criminality of non-institutionalised individuals with ID in Sweden, finding that they were more frequently sentenced for violent crimes than the general population. Martins et al.[16] and McBrien[34] emphasise the importance of sexual crimes. However, the literature describes great variety in this aspect, with special emphasis on violent crimes, fires, sexual crimes, crimes against property, and the antisocial behaviours of alcohol consumption or substance abuse.[27,29,34,41,44–50] Lund believes that crimes related to property are unimportant in subjects with ID.[18]

Focusing on crimes according to the intelligence quotient (IQ) of individuals with ID, in the United Kingdom it has been found that lawbreakers with an IQ lower than 50 are rare and that the relative prevalences of sexual crimes, damage to property and robbery with break-ins (but not other types of robbery) are usually higher among individuals with an IQ in the ''borderline'' range than among the general population; however, other very serious crimes, such as assassination or armed robbery, seem to be insufficiently represented in subjects with ID.[32] Homicide has been described as the crime involved in 12.5% of the cases of subjects with ID that commit crimes, although with no significant differences with other crimes.[10]

The area probably studied the most is precisely the relationship between ID and violent crimes[16,19,29] or the relationship between ID and aggressive behaviour[51] or physical aggression.[8,52] Focusing on homicide, the study with the largest sample found that only 0.8% of the subjects that committed homicide in Sweden had a diagnosis of ID.[33] A study on assessment before trial of individuals accused of homicide indicated that almost 20% of subjects had an IQ less than 70.[29] At any rate, it cannot be said that being diagnosed with ID increases the risk of carrying out a homicide for either males or females, although there are slightly higher rates of ID in women.[21]

The incidence of inappropriate sexual behaviours in subjects with ID is around 15%-33%; in most cases, these involve inappropriate social behaviours rather than coercive behaviours, which is closely related to the limited gender-responsive education that these subjects have.[53] Most sexual delinquents do not present ID,[54] but the literature certainly emphasises the relationship between antisocial sexual behaviours and ID. Comparing sexual and non-sexual delinquents with ID does not yield many differential

characteristics, except that sexual delinquents have a lower prevalence of drug abuse or fewer previous prison sentences.[55]

There are generally few studies comparing delinquent cohorts with appropriate controls or different types of delinquents with ID under controlled circumstances.[55] In addition, all the authors refer to the classifications of intellectual capability of their own populations.[56]

Authors generally indicate that there is a lack of crime-specific research, and that assessment is more often sought in the cases of more serious crimes,[57] which represents a bias. At any rate, correlating crimes with other factors is complex, and there is no simple causal mechanism between ID and delinquency. The apparently high level of variation among countries as to crime patterns, gender, age and socioeconomic class argue against simple associations.[32]

Comorbidity in subjects with intellectual disability that commit crimes

The results are contradictory about the relationship between criminality of subjects with ID and comorbidity with other mental health problems.[20] Some studies show higher rates in subjects with ID that are delinquents,[58] while others indicate lower rates.[20,42] Specifically, high rates of psychiatric disorders and often several comorbid disorders have been in women with ID that commit crimes.[59] This is in line with the data that mental illness is more relevant in delinquency carried out by women.[55,59]

The importance of the existence of dual illness or comorbidity in subjects with ID that commit crimes has been emphasised.[41] Lund[18] indicated that 91.7% of a cohort of 274 delinquents with ID had a diagnosed mental illness, of which 87.5% were classified as behavioural disorders. Alexander[47] reported that slightly less than half of the subjects with ID that had committed crimes had a serious mental illness (psychosis, bipolar disorders or depressive disorders), that approximately a third had a generalised developmental disorder, and that more than a fourth of these subjects had a harmful use of or dependence on alcohol or other toxic substances. Day[60] found that 32% of the sexual delinquents with ID in the study sample had suffered psychiatric illnesses as adults, while Lindsay indicated that a third had a significant mental illness, including psychotic disorders, bipolar disorders and major depression (with a percentage similar to non-sexual delinquents).[6,55]

Substance abuse in individuals that commit crimes has been described to be less common in subjects with ID than in those that do not have this diagnosis.[4,19,27,40,42,61–63] Along the same line, the consumption of toxic substances has been reported to be less frequent in offenders with an IQ under 85.[42] However, it has been found that, among subjects with ID, substance-related problems are 5 times more common in those having legal antecedents.[64] There has also been emphasis on the relevance of the convergence of risk factors in subjects with ID, such as childhood adversities, psychiatric problems as a child or as an adult, and alcohol abuse.[62]

Risk factors and recidivism

Subjects with ID that commit crimes, just like their counterparts in the general population, tend to be young males that have experienced severe psychosocial disadvantages and victimisation from other members of their family. Their problems go back to early childhood and they can have numerous mental health needs.[6,55]

Crocker and Hodgins[39] indicated that such subjects received sentences earlier (before the age of 30); 71% of the males and 43% of the females had been convicted before the age of 18, with important behavioural problems in early childhood. However, it has also been stated that these subjects might be a bit older, with parental supervision a possible protective factor against antisocial behaviours while the parents live (which could also apply to institutionalisation).[55]

The studies all consider the following to be risk factors for committing crimes in subjects with ID: youth, being male, having experienced psychosocial disadvantages, having a relative that commits crimes, a history of behavioural problems, not having a job and comorbidity with other mental disorders.[7,26,27,30,40,42,44,65] High rates of dropping out of school, inappropriate sexual behaviour, poor relationships with others and limited social integration[5,29,66] or early institutionalisation, having parents that divorced with delays or that belong to a low socioeconomic class, and having a behavioural disorder have also been reported to be risk factors.[18]

The association between antisocial behaviour and intelligence can principally be the result of impulsiveness and poor behaviour control.[67] However, the combination of a low IQ and antisocial features has been described as a risk factor. There might be a subgroup of male delinquents with ID that perform more serious violent actions, due to the lack of ''judgement,'' ''planning resources'' or ''self-control.''[10] At any rate, disruptive and antisocial behaviour is more often associated with borderline intelligence and slight ID than with moderate or severe ID.[27,49]

Convicted individuals with ID are very likely to be arrested again. Lindsay[68] found that 43% of the general male aggressor group in the study sample (excluding sexual delinquents) re-offended, although only 16% did so within the following 12 months; these figures are lower than those indicated by other authors. For the group of sexual delinquents, the recidivism rate varied between 9% and 16%. The following characteristics are considered to be a risk factor for recidivism: being young,[36,45] the concurrence of a personality disorder,[45,47,57] history of robbery or robbery[45] and poor family relationships,[20] and the majority of the subjects live with their families before being detained.[36] Social variables, such as poor personal relationships, can consequently act as a risk factor for violence in the future,[57,69,70] while social control might be a protective factor.[70]

There are various approaches to predicting risk in subjects with disability that take into consideration both static and dynamic factors and the interaction between both types.[71]

Assessment

Individuals with ID are over-represented in the criminal justice system in many Western countries.[37] However, ID is often not diagnosed, or it is misdiagnosed as mental illness, in criminal populations. Precise diagnosis is essential so that

these subjects can receive appropriate legal protection during judicial procedures and in rehabilitation programmes.[72]

Lindsay describes 3 areas of forensic assessment for subjects with ID that commit crimes: evaluations in the courts, risk assessment and evaluations for treatment planning.[6]

When the courts assess accountability, the causal relationship stems from the subject's diagnosis of ID. The courts attempt to minimise subjectivity, turning to IQ figures, which require appropriate interpretation.[73] However, intellectual disability understood as an IQ-based concept (that is, an IQ lower than 70) is not particularly satisfactory for subjects that commit crimes, given that delinquents identified as ''mentally deficient'' sometimes have an IQ above 70.[32]

In spite of this, there is no current uniformity in assessing intelligence in criminal populations. There are various tools that measure – or only partially – the same aspects of intelligence.[17,34,74] It is fundamental for intelligence to be measure with scores and with valid, stable constructs. That is, it is widely recognised that intelligence has a hierarchical structure[17] and that reducing intelligence to the minimum (in a single score) does not capture how complex it is, especially in individuals with borderline intelligence.[17,74] Clinging to IQ to mark a general index has led the judicial community to lose sight of how multidimensional and complex the spectrum of cognitive abilities is.[74]

The studies reviewed often indicate that basic demographic information of housing, family structure, childhood behavioural problems, clinical history, legal antecedents, history of family delinquency, drugs, alcohol[39] and the Wechsler Adult Intelligence Scale (WAIS) are used for the forensic assessment.[4,21,29,34,37,73,75,76] However, other studies prorate subtests of the IQ test to obtain an IQ,[40] but the subtest scores are less reliable than total IQ scores.[24] Various studies reviewed use the Kaufman Brief Intelligence Test (K-BIT)[45,75] or subtests of a Canadian test on intellectual function.[29,77] Likewise, the subtest scores are less reliable than total IQ scores.[78]

Although there are important correlations among the various intelligence tests (IQ), research has shown that the scores obtained by the same person on different tests are not identical. Consequently, caution in score interpretation is recommended, and information should be provided about the norms used and the direct scores should be indicated.[17]

Similarly, other instruments can be used to extend the forensic study in ID, such as the PCL-SV, VRAG and HCR-20. These can be used to assess psychopathology without needing to modify the elements or scoring procedures to fit in the characteristics of ID diagnosis.[79,80]

Finally, while IQ is an objective measurement (standard errors apart), interpreting adaptive functioning can be relatively subjective, even though it is quantifiable. For that reason, experts will be called to give their opinion on both IQ test interpretation and on adaptive functioning. In some jurisdictions such as the United States, this is especially relevant and, following the 2002 Supreme Court ruling, the offender's IQ is considered together with the adaptation functions.[22] Experts can still rely on IQ scores, but they have to bear in mind that these scores are inherently imprecise and reconcile them with all the case facts and the personal assessment of the offender. This will help to carry out a complete assessment, instead of simply using the technical focus of an intelligence test.[22,37] Applying cut-off IQ scores strictly does not take into consideration the realities of diagnosis (and the standards in practice) in assessing ID, in both medical and legal contexts.[22]

Measuring adaptive behaviour is logistically more difficult in penal justice contexts, because it generally requires the intervention of a third party that can report the individual's behaviour of interest.[34,75] Nonetheless, direct administration of some adaptive behaviour scales (without the need for a third party) is becoming more and more popular.[75]

Assessing both adaptive behaviour and cognitive function provides a broader view of the individual's capabilities.[72] To ensure that offenders with ID are assessed appropriately, assessments should be based on the AAIDD definition that includes adaptative functions. The experts that testify about ID have to have ''good knowledge of the diagnostic criteria, test development, and measurement and statistics principles, as well as being capable of defending the assessment procedures and results.''[10,24,25] Just as with assessing offenders with mental disorders, assessing offenders with ID requires experience and specialised knowledge about this specific population.[81]

It is crucial to instruct the judge and/or jury about ID, in order to prevent false preconceived ideas. To do so, the expert will assess the psychiatric, cognitive and neuropsychological functional capacities and will link the deficits with the legal criteria,[23] keeping the strengths and skills of individuals with ID from being interpreted erroneously as being incompatible with a diagnosis of ID.[24] For example, biases against subjects with ID have been described in police agents.[15]

Including the assessment of the simulation in all forensic assessments is also recommended, although this is a context in which ID can raise specific problems.[11]

In conclusion, assessment and intervention in cases of subjects with ID that commit crimes should be extended further than the specific criminal behaviour; the purpose and function of the criminal behaviour within the individual's environment and social context social should also be determined to modify such behaviour.[7,56,82] This biopsychosocial assessment focus is essential to understand them and to minimise future maladaptive conduct.[7]

Limitations

The principal review limitation is the predominance of articles that used IQ as the sole criterion for the diagnosis of ID, omitting the criteria of adaptation and disorder development. This biases the possibility of generalising the results to the group of individuals with intellectual disability. Likewise, the undeniable protagonism of Anglo-Saxon literature in the review, in an issue related to legislative factors and the judicial and prison systems, calls into question its generalisation to countries in which this issue has not been studied.

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