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Wrongful convictions in Spain: Systematic analysis of judgments from 1996 to 2022

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ABSTRACT

A comprehensive analysis of wrongful convictions in Spain was conducted. Out of 447 Supreme Court judgments made between 1996 and 2022, 243 cases involving a successful appeal made by a person claiming their innocence were examined in terms of the characteristics of wrongfully convicted individuals, the crime types, and the factors contributing to these judicial errors. An average rate of nine wrongful convictions per year was found, mostly for crimes against public safety and property, with a significant overrepresentation of foreign citizens. Legal professionals' misconduct was identified as the main factor contributing to these wrongful convictions. The mean time between the judgment and the conviction being overturned was around 4.5 years. More than half of the cases were reopened due to evidence indicating that the alleged crime never occurred. While new evidence was the primary reason for reopening cases, only 3 % were reopened based on DNA evidence. The systematic methodology used in this research may serve as a model for future studies on wrongful convictions in other countries. To reduce wrongful convictions in Spain, several key measures must be implemented. Legal representation should be mandatory for all individuals accused of crimes, without exception. Legal professionals must receive enhanced training to minimize judicial errors. Furthermore, stricter forensic protocols should be established, and forensic experts must be properly accredited to prevent the misapplication of scientific evidence in legal proceedings. Additionally, reforms are needed to ensure that plea bargains are subject to more rigorous scrutiny, and that minor crimes are properly investigated.

Wrongful convictions have profound individual, social, community, and institutional consequences (Clow, 2017; Jenkins, 2013; Kukucka, Clow, Horodysky, Deegan, & Gayleard, 2021; Kukucka, Horodyski, & Dardis, 2022; Norris & Mullinix, 2020; Norris, Weintraub, Acker, Redlich, & Bonventre, 2020; Ortiz-Pradillo, 2023). Given their serious implications, wrongful convictions have been investigated for over a hundred years (Gould & Leo, 2010) in countries such as Australia, England and Wales, Germany, Italy, the Netherlands, Canada, and the United States, among others (see Brants, 2012; Dioso-Villa, 2015; Gross, Jacoby, Matheson, Montgomery, & Patil, 2005; Helm, 2022; Leuschner, Rettenberger, & Dessecker, 2020; Lupária, 2020; Robins, 2023; Schuller, Clow, & Erentzen, 2021; West & Meterko, 2015).

Some of this research has analyzed cases compiled by large national organizations, such as the National Registry of Exonerations (2025a) in the United States, the Criminal Cases Review Commission (2025) in the United Kingdom, and the Canadian Registry of Wrongful Convictions (2025).[1] In addition to such country-specific organizations, the European Registry of Exonerations (EUREX, 2025) was recently launched in Europe to collect and analyze data on exonerations across the continent. To date, there is no independent organization in Spain collecting

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[1] The National Registry of Exonerations, 2025 has documented more than 3700 exonerated individuals from 1989 until July 2025, the Criminal Cases Review Commission (2025) has achieved 595 successful appeals from 1997 until July 2025, and the Canadian Registry of Wrongful Convictions (2025) has recorded 89 cases from 1956 until July 2025.

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wrongful conviction cases. However, the General Council of the Judiciary began documenting judicial errors in 2010, and by 2024, 34 cases had already been recognized (Consejo General del Poder Judicial, CGPJ, 2015, 2020, 2025a).

Many studies have examined the characteristics of wrongfully convicted individuals, the main features of the cases, and the factors contributing to judicial errors. However, this topic has only recently started to receive attention in Spain (see Beltrán Calfurrapa, 2024; Blanco-Velasco, Sánchez, & Geven, 2023; Sánchez, Sobral, & Seijo, 2017; Ortiz-Pradillo, 2023; Varona & Kemp, 2020). Recently, Sánchez, Blanco-Velasco, Geven, Masip, and Manzanero (2024) published the first empirical paper on wrongful convictions in Spain that we are aware of. They focused solely on cases where individuals had been wrongfully convicted and sentenced to prison.

Sánchez et al.'s (2024) paper was part of a larger project aimed at creating a national repository (akin to the National Registry of Exonerations in the United States).[2] The full project encompasses all cases of reopened convictions in the country where an error has been acknowledged, regardless of the penalty type (i.e., imprisonment or other kinds of punishment). In this paper, we report data from this comprehensive project as a whole, focusing on the characteristics of wrongfully convicted individuals, the cases, and the factors that contributed to the wrongful convictions. Before describing our study, we review previous research on the topic.

1. Characteristics of wrongfully convicted individuals

Research shows that the vast majority of wrongfully convicted individuals are male, regardless of the country where the study was conducted (Dioso-Villa, 2015; Duce, 2015;Gross et al., 2005; National Registry of Exonerations, 2025a). Typically, females account for fewer than 15 % of exonerees (Sánchez et al., 2024). This gender distribution mirrors that of the incarcerated population as a whole (Duce, 2015).

Furthermore, in both the United States (Gross et al., 2005; National Registry of Exonerations, 2025a) and Australia (Dioso-Villa, 2015), ethnic minorities are overrepresented among those wrongfully convicted. Racial bias is particularly strong in sexual assault cases, where White victims frequently accuse Black defendants, increasing the likelihood of misidentification (see Katzman & Kovera, 2023; Meissner & Brigham, 2001; Smith & Hattery, 2011).

Individuals with criminal records also face a higher risk of wrongful conviction (Gould et al., 2014), as jurors are more likely to find defendants guilty when they are aware of their prior criminal history (Devine & Caughlin, 2014). Additionally, Gould et al. (2014) noted that law enforcement officers often include individuals with prior criminal records as suspects in photo lineups, thereby increasing the risk of misidentification. Finally, the tendency of police officers and judges to focus more closely on individuals with prior records may lead them to overlook exculpatory evidence (Gould, Carrano, Leo, & Hail-Jares, 2014).

2. Characteristics of wrongful conviction cases

There is some discussion regarding whether judicial errors are more frequent in serious or minor crimes (Gould & Leo, 2010). More wrongful convictions have been reported in serious cases, particularly homicides, compared to minor crimes, in both the United States (Gross et al., 2005) and Australia (Dioso-Villa, 2015). However, some caution is warranted when interpreting the Australian data. Although the Australian repository was built from multiple sources—including legal databases, academic publications, Hansard reports, and verified case outcomes—some cases were initially identified through media coverage, which may overrepresent violent and serious incidents. Nevertheless, in the most comprehensive record of wrongful convictions to date—the National Registry of Exonerations (2025a) in the United States—38 % of documented wrongful convictions occurred in murder cases.

Conversely, in Switzerland, 67 % of reopened cases involved penal orders (Gilliéron, 2012), which are summary proceedings for offenses with penalties of up to six months of imprisonment. A higher incidence of wrongful convictions for minor (compared to serious) crimes may be due to the simplified and expedited nature of resolving such cases (Enescu, 2023), or to limited resources being allocated to their investigation (Burrows et al., 2005; Hunt, Saunders, & Kilmer, 2019).

It is possible that, in the United States and Australia, errors also occur more frequently in less severe cases, but this is not reflected in exoneration statistics. Specifically, some innocent individuals facing mild penalties may abandon efforts to reopen their cases to avoid the ordeal of an additional judicial process (Gould & Leo, 2010) as well as the difficulties associated with presenting evidence of their innocence (Garrett, 2017). In the most serious criminal cases, usually involving violent or sexual offenses, conviction evidence (biological traces) is more likely to exist, which can help establish a person's innocence. This is not usually the case in less serious offenses, which rely almost exclusively on testimonial evidence. For this reason, it is more difficult to reopen a case involving a minor crime.

3. Factors contributing to wrongful convictions

While wrongful convictions can be caused by a single factor, they are typically the result of multiple interrelated issues (Berube, Wilford, Redlich, & Wang, 2022; Yaroshefsky & Schaefer, 2014). In the following, we briefly discuss the five most prevalent factors (Innocence Project, 2023; National Registry of Exonerations, 2025b).

3.1. Perjury or false accusation

This factor accounts for 64 % of the more than 3700 wrongful convictions in the United States registered by the National Registry of Exonerations, 2025. It refers to intentionally false testimonies provided by either jailhouse informants or witnesses (Gross et al., 2005). Of note, honest mistakes need to be separated from intentional perjury (see Köhnken, Manzanero, & Scott, 2015; Masip, Garrido, & Herrero, 2004; Sporer, 2008). For instance, a victim who misidentifies a suspect they genuinely believe to be the perpetrator is committing an unintentional error, not an act of perjury (Sánchez et al., 2024).

3.2. Professional misconduct

This is the second most common factor, contributing to 60 % of wrongful convictions in the United States (National Registry of Exonerations, 2025b). Misconduct may be either intentional or unintentional (Gould & Leo, 2010). Because of the intrinsic uncertainties in criminal investigations, a number of biases and subjective elements can influence the decision-making of professionals (Covey, 2012; Joy, 2006; Lucas, Graif, & Lovaglia, 2006). This may occur at multiple stages during investigative process—i.e., information collection and processing, hypothesis testing, and the structuring and description of the criminal event (Ask & Fahsing, 2019). For instance, "tunnel vision" can lead investigators to focus solely on a specific suspect based on their initial beliefs, causing them to overlook exonerating evidence (Findley & Scott, 2006; Godsey, 2017). Misconceptions about how witness memory works and the factors that affect its accuracy (Benton, Ross, Bradshaw, Thomas, & Bradshaw, 2006; Houston, Hope, Memon, & Read, 2013; Kassin, Tubb, Hosch, & Memon, 2001; Manzanero, Alanzavez, Ferrer Beltrán, & Vázquez, 2025), or about best practices for obtaining evidence, may also contribute to misconduct. Additionally, negligent or

[2] A dedicated website containing the data from the Spanish Wrongful Convictions Registry is currently under development. Researchers who wish to access the data before the official launch are welcome to contact the corresponding author.

incompetent legal defense constitutes another form of professional malpractice (Huff, 2004), and systemic issues frequently faced by public defenders (e.g., having to deal with too many cases at once) can further contribute to wrongful convictions (Duce, 2013).

3.3. Misapplication of forensic science

This factor contributed to 29 % of wrongful convictions in the United States (National Registry of Exonerations, 2025b), and includes using either invalid or outdated forensic methods, the presentation of misleading expert testimony, as well as misconduct by forensic experts (Scott, Manzanero, Muñoz, & Köhnken, 2014). The cognitive biases of forensic analysts are also a source of concern; forensic experts' prior expectations, exposure to potentially misleading or unnecessary information, as well as organizational, educational, personal, and cognitive factors can diminish their objectivity (see Dror, 2020; Dror et al., 2021). Although technology is increasingly integrated into these processes, human involvement remains a significant factor in most forensic tasks (Herrero, 2021).

3.4. Eyewitness misidentification

According to the National Registry of Exonerations, 2025, misidentifications are the fourth leading cause of wrongful convictions in the United States contributing to 27 % of exonerations. Identifying a perpetrator is challenging due to the limitations of human perception and memory. Many factors influence the accuracy of eyewitness identification, including those related to the incident, the victim or witness, and systemic or procedural variables (see Wells, 1978). For instance, poor lighting conditions at the time of the incident and the distance between the eyewitness and the perpetrator can decrease the witness's ability to perceive crucial details, thus hindering any subsequent lineup identification (Carlson et al., 2016; Lindsay, Semmler, Weber, Brewer, & Lindsay, 2008; Nyman, Lampinen, Antfolk, Korkman, & Santtila, 2019). Additionally, the cross-race effect (Meissner & Brigham, 2001), as well as witness biases and stereotypes, can affect the way events are perceived and interpreted. Finally, procedural aspects such as lineup composition, the instructions given to witnesses, and whether double-blind methods are used can also significantly affect the accuracy of identifications (Wells et al., 2020).

3.5. False confessions

False confessions, which contributed to 13 % of wrongful convictions in the United States (National Registry of Exonerations, 2025b), involve detailed and complex self-accusations made by an innocent person (Gudjonsson, 2018). False confessions can result from coercive interrogation techniques and/or psychological vulnerabilities (Gudjonsson, 2018; Kassin et al., 2010). However, there are also instances of voluntary false confessions made by individuals pursuing notoriety or attempting to protect others (Aebi & Campistol, 2013; Kassin, 2022). In a recent survey conducted in Spain, over 80 % of law enforcement investigators reported having obtained at least one false confession (range: 1–150; Schell-Leugers, Masip, González, Vanderhallen, & Kassin, 2023). While the study revealed that coercive techniques are rarely employed by the Spanish police, over 20 % of the surveyed officers indicated that at least one of the false confessions they had witnessed was obtained through coercion.

3.5.1. Study overview

As recommended by Leo (2017), research on wrongful convictions must adopt a systematic and rigorous scientific approach, ensuring transparency and replicability in reporting sources, inclusion and exclusion criteria, and coding procedures. In this study, we first defined wrongful conviction within the Spanish legal framework. We then collected 447 Supreme Court review judgments issued between 1996 and 2022. They were retrieved from the Aranzadi and CENDOJ databases using specific search criteria (as explained below). Based on prior research and Spanish legislation, we developed a coding scheme tapping the variables of interest that was systematically applied by a trained team of coders. Inter-rater reliability was calculated to ensure consistency. The dataset contained 243 cases that involved claims of factual innocence; only these cases were included in this study. We analyzed these cases to examine the characteristics of wrongfully convicted individuals, case features, contributing factors, and the types of evidence that enabled exonerations. We also compared several of these aspects with the corresponding data from the overall population of convicted individuals in Spain by using formal statistical tests. This analysis provides a comprehensive overview of wrongful convictions in Spain.

4. Method

4.1. Legal framework for wrongful convictions in Spain

Spain is rooted in an inquisitorial criminal justice system with robust legal safeguards. As a result, the ordinary criminal process allows different types of appeals depending on the grounds for the claim. However, once all the ordinary appeals are exhausted and a case is closed with a conviction, it can only be reopened through an extraordinary appeal known as "recurso de revisión" (review appeal). Articles 954 to 961 of the Spanish Criminal Procedure Law regulate this type of appeal. Either the Public Prosecutor's Office, the convicted person, or a relative (if the convicted person has died)[3] can file the review appeal to the Supreme Court.

According to the law, a review appeal can be filed if the conviction was based on either documents or testimonies later found to be false, or on confessions obtained through violence or coercion. A review appeal is also possible if the conviction resulted from judicial misconduct, if the defendant had been convicted twice for the same crime (*Non bis in idem*), or if new pieces of evidence that were unknown during the initial trial are found. New evidence is considered to exist when either (a) a person other than the convicted individual assumes responsibility for the crime, (b) it is shown that the identity of the accused was mistaken, (c) it is demonstrated that the convicted person was elsewhere (e.g., serving a prison sentence) at the time of the crime, such that they were unable to commit the crime, (d) new kinds of evidence such as fingerprints or DNA tests are provided, or (e) it is confirmed that the convicted person was a minor (Gullón, 2017). Moreover, since 2015, the convicted individual can file a review appeal if the European Court of Human Rights (ECHR) issues a judgment indicating a violation of human rights as defined in the European Convention for the Protection of Human Rights and Fundamental Freedoms and its Protocols (such as the right to a fair trial; see also Blanco-Velasco et al., 2023).

Definition of wrongful conviction. Henry, Blanco-Velasco, Cardoso, Hamilton, and Clow (2025) recently highlighted the lack of clarity and consensus surrounding the term wrongful conviction. To ensure precision and in line with Finley 's (2011) recommendation, we adopted a legal definition of wrongful conviction. Specifically, a conviction is wrongful when, after an individual had been initially convicted in a final judgment, the Spanish Supreme Court overturned the original verdict upon review appeal based on new evidence revealing an error in the initial decision.

However, like in England and Wales (Helm, 2022), courts in Spain do not explicitly determine whether a person is factually innocent. They merely overturn convictions if the judgment was unjust considering the law and the principles of justice. For instance, it is possible for the Court to overturn a conviction of a truly guilty petitioner because they were sentenced based on insufficient evidence. In addition, some overturned

[3] Specifically, a spouse, or whoever had cohabitation as such, as well as ascendants and descendants.

Table 1
Coding variables and mean reliability across coding rounds weighted by the number of cases coded in each round.

General category	Variables	Krippendorff's Alpha
Characteristics of the wrongfully convicted individual	Gender: Male, Female, Other, Unspecified	0.99
	Citizenship: Selected from a drop-down list that, in addition to specific countries, also contained "Foreign" (the appellant's foreign status was mentioned but their country was left unspecified) and "Unspecified". In cases of dual citizenship, coders marked this accordingly.	0.87
	Prior police or criminal record (which could either be sealed or active at the time of the conviction): Yes, No, Unspecified	0.72
	Criminal responsibility: Psychological issues or substance addiction that modify criminal liability: Yes, No, Unspecified	0.65
	Particularly vulnerable individual: Appellant with an intellectual or developmental disability, or suffering from a psychological disorder	0.83
	Birthdate	0.88
Case characteristics	Date of crime	0.77
	Date of conviction	0.99
	Date of the judgment resolving the review appeal	1.00
	Type of penalties imposed (each of the following categories was coded as Yes or No because an individual could receive more than one sentence):	
	• Deprivation of liberty: Prison	
	• Deprivation of liberty: Major prison (from six years and one day to 12 years in prison)[b]	.90[a]
	• Deprivation of liberty: Minor prison (from six months and one day to six years in prison)[b]	
	• Deprivation of liberty: Major detention (from one month and one day to six months of deprivation of liberty)[b]	
	• Deprivation of liberty: Minor detention (from one day to one month of deprivation of liberty)[b]	
	• Deprivation of liberty: Weekend arrest	
	• Deprivation of liberty: Other types of deprivation of liberty	
	• Deprivation of liberty: Confinement to a (closed) forensic facility	
	• Community service	0.92
	• Fine	0.90
	• Court costs	0.79
	• Ancillary penalties	0.87
	• Other penalties	0.40
	• No information available on penalty type	0.81
	Duration of deprivation of liberty (in days)	0.94
	Type of crime (The total number of convictions for each type of crime leading to a wrongful conviction was coded; e.g. 0, 1, 2…[c])	
	• Minor offense (offenses under the Criminal Code before the 2015 reform, punishable with minor penalties not involving prison)	0.82
	• Homicide	1.00
	• Abortion	1.00
	• Assault	1.00
	• Injuries to a fetus	1.00
	• Genetic manipulation	1.00
	• Crimes against freedom	0.75
	• Torture	0.99
	• Human trafficking	0.93
	• Sex crimes	0.99
	• Failure to stop and render aid	1.00
	• Crimes against privacy	1.00
	• Crimes against honor	1.00
	• Crimes against domestic relations	1.00
	• Crimes against property	0.97
	• Illegal funding of political parties	1.00
	• Crimes against the public treasury and social security	1.00
	• Crimes against worker's rights	0.93
	• Crimes against the rights of foreign citizens	1.00
	• Offenses related to land use, urban planning, and the environment	0.95
	• Crimes against public safety	0.98
	• Forgery	1.00
	• Crimes against the Public Administration	0.95
	• Crimes against the Justice Administration	1.00
	• Crimes against the Spanish Constitution	1.00
	• Crimes against public order	0.91
	• Crimes of treason, against the peace or independence of the State, and related to National Defense	1.00
	• Crimes against the international community.	1.00
	• No information available on crime type.	1.00
	Plea bargain: Yes, No, Unspecified	0.69
Factors contributing to judicial errors[b]	False testimony of victims and witnesses	0.96
	Legal professionals' misconduct (lawyers, judges, prosecutors, the police…)	0.80
	Misidentifications	0.89
	Misapplication of forensic science	0.81
	False confessions (both false confessions and admissions)	0.86
	Other	0.84
	No information available about contributing factors	0.92
Information for reopening the case[d]	DNA evidence	1.00

(continued on next page)

Table 1 (*continued*)

General category	Variables	Krippendorff's Alpha
	Scientific evidence other than DNA	0.91
	Other kinds of evidence (e.g., phone records, evidence that the original conviction was based on false confessions or forged documents...)	0.65
	Identification of the true culprit	0.69
	Evidence that the original conviction was based on a false testimony (both false confessions and admissions)	0.88
	Proven solid alibi impeding involvement in the crime (e.g., the appellant was in prison or in hospital at the time of the crime)	0.80
	The crime never occurred	0.74
	Final judicial resolution from the European Court of Human Rights declaring a violation of rights recognized in the European Convention on Human Rights	1.00
	Judges or magistrates' misconduct	0.29
	Non bis in idem cases (i.e., the defendant had been convicted twice for the same crime)	0.97
	Unspecified	0.62
Other variables	Claimed innocence: Yes, No, Unspecified	0.91

[a] Krippendorfs alpha was calculated by combining all types of deprivation of liberty into a single category that indicated whether the appellant had been subjected to any form of deprivation of liberty.
[b] These penalties were part of the former Spanish Criminal Code (some review judgments in our sample addressed cases of individuals convicted under the previous Criminal Code).
[c] Note that a single case could involve multiple crimes attributed to the same wrongfully convicted individual.
[d] Each contributing factor and each type of information contributing to reopening the case was coded as present or absent.

convictions correct procedural errors rather than reflect actual innocence[4]; this includes *Non bis in idem cases,* or instances in which a minor has been convicted under the Spanish Criminal Code, rather than under the country's law regulating the criminal responsibility of minors (Organic Law 5/2000). In such instances, the annulment corrects a procedural error but does not imply innocence.

To operationalize this distinction, our coders determined whether the case involved factual innocence or another. Thus, appeals were classified as innocence claims when the appellant explicitly alleged wrongful conviction for an offense they did not commit and the annulment of the sentence was based on new exculpatory evidence. By contrast, appeals were not considered claims of innocence when they focused on procedural or legal issues unrelated to factual guilt—such as juvenile jurisdiction errors, *Non bis in idem* cases, appeals concerning expired sentences, or challenges limited to aggravating circumstances (e.g., prior record) rather than the conviction itself. Cases with insufficient information were coded as indeterminate. Only cases coded as involving factual innocence were included in this research.

Following Acker and Wu (2019), we also considered convictions resulting from the erroneous rejection of affirmative defenses (e.g., self-defense or insanity) as wrongful. These cases were coded as involving factual innocence, broadly defined to include situations in which the law recognizes that the defendant should not have been convicted, even if factual guilt is not explicitly disproven.

As described below, coders also recorded the characteristics of wrongfully convicted individuals, the specifics of their cases, factors contributing to these errors, and the types of evidence required to reopen the cases.

4.2. Sample

Searches for Supreme Court judgments published between May 24, 1996 (the date the current Spanish Criminal Code came into effect) and December 31, 2022, were conducted in the Aranzadi and CENDOJ jurisprudence databases. The term "recurso de revisión" ("review appeal") was entered in both databases. In Aranzadi, the search involved exploring the criminal jurisprudence thesaurus using this term. In CENDOJ, the search was narrowed down by selecting "Tribunal Supremo" ("Supreme Court") and "sala de lo penal" ("criminal division") as the entity types. Since review appeals fall under the Criminal Procedure Law, this law was chosen as the legislative domain to retrieve the judgments. In total, 484 judgments were found in Aranzadi and 715 in CENDOJ. After removing 449 duplicates, 303 judgments were excluded as they involved other types of appeals or were dismissed review appeals. The selection process resulted in 447 review judgments for analysis.

4.3. Coding

The variables to code were determined based on a review of existing literature and prior research in the field of wrongful convictions. A coding manual was developed that listed all variables and their coding categories. Table 1 provides a comprehensive overview of these variables and their descriptions. For clarity, the variables are grouped into the following main categories: characteristics of the wrongfully convicted individual, case characteristics, factors contributing to judicial errors, information relevant for reopening the case, and other variables.

Two researchers and five research assistants acted as coders. They all attended two training sessions prior to coding subsets of judgments. Since the study included all judgments that accepted review appeals, these could not be used for training purposes. Instead, judgments that rejected review appeals were selected for training to avoid using the actual data, as they contained information comparable to the target judgments. During the first training session, questions regarding the coding manual were clarified, one review judgment was coded collaboratively, and two additional judgments were assigned for independent coding at home. In the second session, the independently coded judgments were reviewed and discussed, followed by several additional judgments coded collaboratively.

Out of the total 447 review judgments, 302 (67.56 %) were coded independently by two coders. The remaining 145 judgments (32.44 %) were coded by a single coder due to high inter-rater agreement, which supported the decision to proceed with single coding for these cases. Coding was conducted over six rounds, allowing for opportunities to identify and resolve misinterpretations. This process facilitated the adjustment and consolidation of criteria to reduce inconsistencies. After each round, discussions were held among coders to resolve

[4] Gould and Leo (2010) define procedural errors as those legal missteps that do not necessarily indicate the appellant's innocence, which differs from cases of factual innocence.

discrepancies and reach a consensus.[5]

Some review judgments did not contain enough information to code certain variables. In these instances, whenever the databases included earlier judgments related to the case—such as the original conviction or judgments addressing prior ordinary appeals—these were examined to complete the coding.

Other variables were combined after coding. Specifically, all types of deprivation of liberty (i.e., prison, major prison, minor prison, major arrest, minor arrest, weekend arrest, deprivation of liberty, and confinement to a forensic facility) were grouped under *Prison sentences*. Similarly, although coders recorded the specific country of citizenship for each appellant, due to data protection concerns, we recoded this variable into four categories: Spanish, Foreign, Dual Citizenship, and Unspecified.

4.4. Coding reliability

In all coding rounds, each individual case was coded independently by two different coders (see Note 5 for detail). Table 1 shows the mean Krippendorff's Alpha across all rounds, weighted by the number of cases coded in each round. Most values were higher than 0.80, indicating near-perfect agreement, with the remaining figures mostly falling in the $0.60 \leq 0.80$ range, reflecting substantial reliability (Hughes, 2021; Landis & Koch, 1977). Reliability was low only for *Other penalties* (0.40) and *Judges or magistrates' misconduct* (0.29), likely due to the small number of cases in these categories (De Swert, 2012).

4.5. Selection of final judgments for analysis

The 447 coded judgments involved 487 separate cases.[6] Out of these, 243 cases (49.90 %) involved an appeal from a person asserting their innocence. These cases were included in this study and are discussed below. In contrast, 229 cases (47.02 %) involved appellants who did not claim innocence (i.e., *Non bis in idem* or juvenile cases). In the remaining 15 cases (3.08 %), the coders were unable to determine whether the appellants considered themselves guilty.[7] These 244 cases were excluded and are not discussed further.

5. Results

5.1. Characteristics of wrongfully convicted individuals

5.1.1. Gender

Males ($n = 209$; 86.01 %) significantly outnumbered females ($n = 34$; 13.99 %) among wrongfully convicted individuals, χ^2 (1) = 126.03, $p <$ .001, with a large effect size ($phi = 0.72$).

5.1.2. Age

The date of birth was not reported for 190 individuals (78.19 %). For the remaining 34 cases (21.81 %), ages at the time of conviction ranged from 19 to 67 years ($M = 34.94$, $SD = 10.10$; $Mdn = 33.00$). Among these individuals, 66.04 % were 35 years old or younger.

5.1.3. Citizenship

Citizenship information was missing for 135 individuals (55.56 %). Among those with recorded citizenship, 51 (47.22 %) were Spanish, 53 (49.07 %) were foreign citizens, and four (3.70 %) held dual citizenship.

5.1.4. Criminal responsibility and vulnerability

Three individuals (1.23 %) were found to have diminished criminal responsibility. For 81 defendants (33.33 %), it was specified that they had no diminished criminal responsibility. In the remaining 159 cases (65.43 %), no information regarding criminal responsibility was provided. Additionally, we also coded vulnerability, and three individuals (1.23 %) were classified as particularly vulnerable.

5.1.5. Prior police or criminal record

Information regarding prior police or criminal records was unavailable for approximately half of the cases ($n = 123$; 50.62 %). Among the remaining 120 individuals, 68 (56.67 %) had prior records, while the remaining 52 (43.33 %) did not.

5.2. Characteristics of wrongful conviction cases

5.2.1. Yearly distribution of wrongful convictions

The yearly average number of wrongful convictions was $M = 7.15$ ($SD = 5.05$). Overall, 23 of these convictions (9.47 %) were based on the previous Criminal Code, as they occurred prior to 1996 (see Fig. 1). Wrongful convictions appear to have been rare before 1992 ($M = 1.20$, $SD = 0.45$), more frequent between 1993 and 2007 ($M = 5.47$, $SD = 1.81$), and increasingly prevalent since 2008 ($M = 11.07$, $SD = 5.25$). In fact, the years 2008, 2009, 2013, and 2014 each recorded more than 15 wrongful convictions, collectively accounting for 28.81 % of the total cases in the sample.

5.2.2. Yearly distribution of exonerations

On average, nine wrongful convictions were overturned each year ($SD = 5.88$). However, as shown in Fig. 2, there was a turning point in 2011. Specifically, while only 30 % of the exonerations occurred during the first 15 years analyzed (1996–2010), with $M = 4.87$ exonerations per year ($SD = 1.88$), the remaining 70 % were issued between 2011 and 2022 (12 years), with $M = 14.17$ exonerations per year ($SD = 4.97$). This difference was significant, $t(13.54) = -6.14$, $p < .001$, with a very large effect size (*Cohen's* $d = 2.47$). Notably, 2015 had the highest number of exonerations, with 23 cases.

5.2.3. Time until conviction and appeal judgment

On average, the defendants were convicted 1 year and 4 months after the crime occurred (SD = 2 years and 4 months; range: 0 days to 15 years and 3 months). However, the distribution was highly skewed, with Mdn = 5.5 months, and 64.47 % of convictions occurring within one year of the crime. Furthermore, an average of 4 years and 5 months elapsed between the time of conviction and the ruling on the review appeal (SD = 3 years; Mdn = 3 years and 6 months; range: 10 months to 15 years and 7 months).

5.2.4. Penalty type

The type of penalty imposed was not reported in 56 cases (23.05 %). For the remaining cases, and after disregarding the payment of court costs and ancillary penalties (which typically accompany more severe sentences), the most common penalty types were a fine (46.50 % of

[5] Not all coders participated in all rounds, due to differing levels of involvement and availability throughout the project. While all coders participated in the first two rounds, the number of judgments coded by each individual coder in each round differed. For example, in Round 1, 75 judgments were coded: three coders acted as primary coders and each independently coded 17 judgments, three additional coders also acted as primary coders but coded only eight judgments each, and an additional coder served as secondary coder for all 75 judgments. Similar procedures were followed in subsequent rounds with varying numbers of coders and judgments. Feel free to contact the corresponding author for detail.

[6] The number of cases differs from the number of judgments because one judgment can include more than one appellant, and one individual can appeal multiple judgments (i.e., the appellant claims having been wrongfully convicted on several occasions).

[7] For instance, some review judgments overturned a previous judgment but ordered a retrial, meaning that the individual could be convicted again. If information about the new judgment following the retrial was not available (e.g., because the new trial had not taken place yet by the date when we conducted our database searches), then these cases were classified as indeterminate regarding the individual's actual innocence.

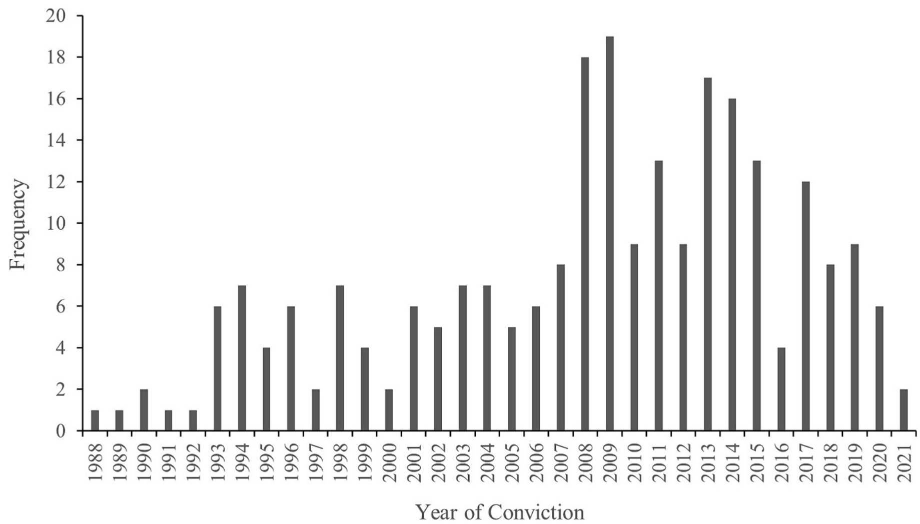

Fig. 1. Number of Wrongful Conviction by Year of Conviction.

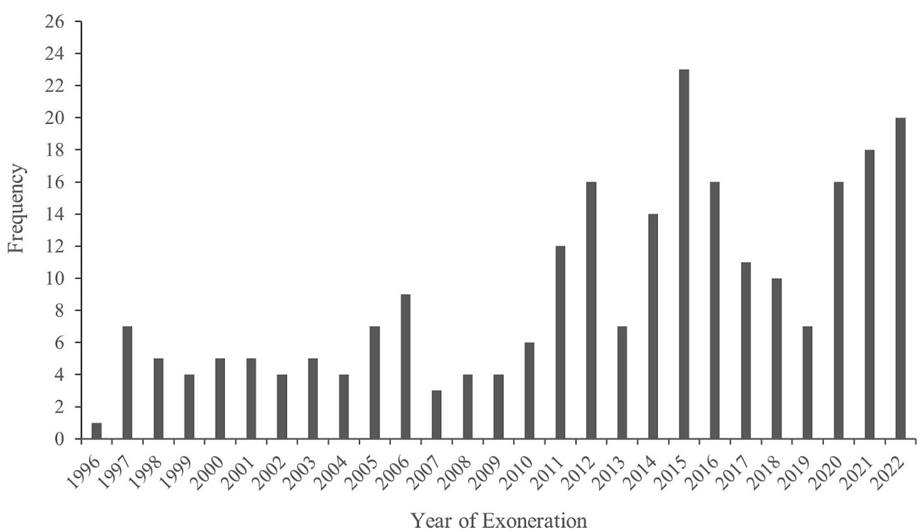

Fig. 2. Number of Wrongful Conviction by Year of Exoneration.

Table 2
Frequencies and Percentages for each Type of Penalty.

Type of Penalty	Frequency	Percentage
Court costs	135	55.56
Fine	113	46.50
Ancillary penalties	104	42.80
Liberty deprivation	88	36.21
No information available	56	23.05
Community services	16	6.58
Other	8	3.29

Note. The sum of the total percentage is greater than 100 % because one single person could be sentenced to more than one penalty type.

Table 3
Frequencies and Percentages of People Wrongly Convicted for Each Crime Type.

Type of crime	Frequency	Percentage
Crimes against public safety	107	44.03
Crimes against property	80	32.92
Assault	20	8.23
Minor offenses	17	7.00
Crimes against the Justice Administration	14	5.76
Forgery	10	4.12
Crimes against public order	8	3.29
Sex crimes	7	2.88
Crimes against freedom	6	2.47
Crimes against honor	4	1.65
Homicide	3	1.23
Offenses related to land use, urban planning, and the environment	3	1.23
Crimes against the Public Administration	3	1.23
Torture	2	0.82
No information available on crime type	2	0.82
Crimes against domestic relations	1	0.41
Crimes against the rights of foreign citizens	1	0.41

Note. Only type crimes with a frequency of at least 1 in our sample are included in the table. The sum of the total percentage is greater than 100 % because one single person could be convicted for more than one crime type.

Table 4
Frequencies and Percentages for Factors Contributing to Wrongful Convictions.

Contributing factors	Frequency	Percentage
Legal professionals' misconduct	178	73.25
False confessions and admissions	68	27.98
Misapplication of forensic science	55	22.63
Other factors	24	9.88
False testimony	20	8.23
Misidentifications	18	7.41
Not reported	14	5.76

Note. The sum of the total percentage exceeds 100 % because wrongful convictions could be caused by more than one factor.

cases) and deprivation of liberty (36.21 % of cases; see Table 2).

5.2.5. Type and number of crimes

Most individuals ($n = 202$; 83.13 %) were convicted of a single type of crime. An additional 10.29 % of individuals were convicted of two different types, and 5.76 % were convicted of between three and six different types. In two cases (0.82 %), information on the types of crimes for which the individuals were convicted was unavailable. The most prevalent crime types were offenses against public safety (such as driving offenses or drug trafficking; 44.03 %) and property crimes (32.92 % of cases; see Table 3). These two types of offenses, either individually or combined, were present in 75.72 % of wrongful conviction cases. The rest of the categories were much less frequent (Table 3).

5.2.6. Plea bargain

[8] In 102 cases (41.98 %), it was not specified whether a plea bargain had occurred. Among the remaining 141 cases, 100 (70.92 %) were resolved following a plea bargain.

5.3. Factors contributing to wrongful convictions

Each case could be explained by the combination of approximately two contributing factors ($M = 1.56$; $SD = 0.61$; $Mdn = 2.00$; *Range*: 1–4). The main factor contributing to wrongful convictions in Spain was the broad category of misconduct by legal professionals, which was present in 73.25 % of cases. False confessions and admissions,[9] as well as misapplication of forensic science, were the next most common contributing factors (each present in about 25 % of cases), though these were far less frequent than professional misconduct (Table 4).[10]

Table 5
Frequencies and Percentages for Information to Reopen Wrongful Conviction Cases.

Type of information	Frequency	Percentage
Non-scientific evidence	171	70.37
The crime never occurred	133	54.73
Identification of the real culprit	59	24.28
Scientific evidence other than DNA	58	23.87
Solid alibi impeding involvement in the crime	30	12.35
False testimony	19	7.82
European Court of Human Rights' judgment	9	3.70
DNA evidence	8	3.29
Judgment of judicial misconduct	1	0.41
Unspecified	1	0.41

Note. The sum of the total percentage exceeds 100 % because wrongful convictions could be reopened because of more than one type of information.

5.4. Types of information allowing the reopening of the case

Table 5 shows the number and percentages of cases reopened based on each type of information. Most cases (70.37 %) were reopened due to non-scientific evidence (e.g., official findings of falsified documents or coerced confessions, and non-scientific records such as administrative documents, phone logs, work attendance records, or police reports). By comparison, both DNA evidence and other kinds of scientific evidence (such as fingerprint analysis, anthropomorphic evidence, graphological evidence, etc.) were used only rarely (3.29 % and 23.87 % of cases, respectively).

Furthermore, just over half of the cases ($n = 133$; 54.73 %) were reopened because it was demonstrated that the crime had not actually occurred. Of these cases, 61.65 % involved crimes against public safety. In other words, 82 individuals were wrongfully convicted of public safety crimes that had never taken place.[11] In the remaining 110 cases (45.27 % of all cases), where a crime had indeed occurred, the true perpetrator was identified in approximately half of them ($n = 59$; 53.64 %).

6. Discussion

6.1. Characteristics of wrongfully convicted individuals

Every year, the Spanish National Statistics Institute (Instituto Nacional de Estadística; INE, 2024) and the General Council of the Judiciary (Consejo General del Poder Judicial; CGPJ, 2025b) publish data on the sex, age, and citizenship of all individuals definitively convicted in Spain. Data was available for the period from 2007 to 2022. Among the 243 wrongfully convicted individuals included in the analysis, 163 were convicted between 2007 and 2021.[12] The demographic characteristics of these 163 individuals were compared with INE data

[8] The Spanish system of plea agreements has some differences compared with the procedures in other countries. Under Spanish criminal procedure, plea bargains involve the defendant acknowledging the facts and accepting the most serious charge—whether brought by the Public Prosecutor, a private party, or a popular accusation—after negotiation with the prosecution. This allows the defendant to avoid a full trial and may lead to a reduction of up to one-third of the potential penalty. Guilty pleas also prevent ordinary post-agreement appeals, as they render the judgment final. Agreements are subject to judicial review to ensure the defendant's consent is informed, voluntary, and legally valid. The procedure streamlines the criminal justice system but is limited to cases where the most severe sentence requested does not exceed six years.

[9] This variable captures all instances of self-incrimination that contributed to wrongful convictions, that is, false confessions, false admissions, and plea agreements. Because our study relied exclusively on court judgments, information on false confessions obtained during police interrogations was available for only a limited number of cases. To address this limitation and considering the conceptual similarities between false confessions and guilty pleas (Redlich, 2010), we decided to code all these instances into the same variable. Ultimately, 11 cases coded in this category involved plea agreements.

[10] The same analyses were also conducted after excluding cases involving convictions for crimes against public safety, as this offense, due to its high prevalence, could potentially distort the representation of other contributing factors to wrongful convictions. Excluding these cases, the following percentages were observed: misconduct by legal professionals, 69.12 %; misapplication of forensic science, 30.15 %; false confessions, 13.24 %; false testimony, 13.24 %; misidentifications, 11.76 %; other causes, 8.09 %; and not reported, 3.68 %. In contrast, including these cases only increased false confessions to 27.98 %. This comparison indicates that, apart from false confessions, including collective security offenses does not significantly alter the overall pattern of contributing factors.

[11] This represents 76.64 % of all wrongful convictions for crimes against public safety ($n = 107$).

[12] Our data did not include any wrongful conviction in 2022 due to its recency.

from the corresponding period, during which about 3.5 million individuals were convicted nationwide, allowing examination of potential differences.[13]

Statistical tests (Z-tests and Fisher's exact tests) were used for these comparisons. These are presented here, in the Discussion section, rather than in the Results section, as the INE and CGPJ data were not collected as part of this study. However, these tests allow for precise comparisons between the wrongfully convicted individuals and the sample of all convicted individuals in Spain. Therefore, they provide descriptive context, quantify demographic differences, and help frame our findings within the broader population of convicted individuals in the country, thus contributing to the understanding and interpretation of the current outcomes.

6.1.1. Gender

The proportion of males and females did not differ significantly between wrongfully convicted individuals and all convicted people (Z-test for comparison of proportions, assuming equal population proportions [according to the formula described in Fleiss, Levin, & Paik, 2003, p. 54]: $Z = 1.34$, $p = .180$, *Cohen's* $h = 0.12$). Other studies have also reported that males outnumber females among wrongfully convicted individuals, and the respective proportions typically align with the distribution of all convicted individuals in the respective country (e.g., 87 % of wrongfully convicted individuals were male in Australia, Dioso-Villa, 2015; 81 % in Chile, Duce & Beltrán, 2024; 81 % in Germany, Leuschner et al., 2020; and 91 % in the United States, National Registry of Exonerations, 2025).

6.1.2. Age

Previous research has found an overrepresentation of young adults among the wrongfully convicted (Drizin & Leo, 2004). In our sample, age information was available for only 40 of those individuals wrongfully convicted during the years examined by the INE (2024). We made a distinction between individuals up to 35 years old and those who were 36 or older.[14] The data showed that while 70.00 % of the wrongfully convicted individuals were in the younger group (≤ 35 years) at the time of conviction, only 54.17 % of all definitively convicted individuals were in the younger group. However, a Fisher's exact test revealed that this effect was not significant, $p = .056$, $phi = 0.001$. Since this analysis is based on a small sample, cautiousness is warranted in interpreting this null finding.

6.1.3. Citizenship

The review judgments reported the citizenship of only 84 of the 163 individuals in our sample who had been convicted during the years examined by the INE (2024) and the CGPJ (2025b). Of those 84 individuals, 44.05 % ($n = 37$) were Spanish and 55.95 % ($n = 47$) were foreign nationals. In contrast, the INE dataset showed that 74.62 % of convicted individuals were Spanish and 25.38 % were foreign nationals. To assess this difference, Z-tests for comparison of proportions were conducted without assuming equal population proportions, using separate variance estimation (according to the formula described in Agresti, 2007). The results revealed a significant difference in citizenship distribution, with a higher proportion of foreign nationals among wrongfully convicted persons compared to the INE data ($Z = 4.22$, $p < .001$, *Cohen's* $h = 0.63$).[15]

Considering that foreign citizens are a minority group, our findings are consistent with observations in other countries, such as Australia (Dioso-Villa, 2015) and the United States (Smith & Hattery, 2011), where minority group members are overrepresented among the wrongfully convicted. In the United States, for example, 66 % of exonerated individuals are Black or Hispanic, compared to 31 % who are White (National Registry of Exonerations, 2025).[16] In contrast, a small-scale study conducted in Germany found no bias against minorities; of 31 individuals, only one was non-German, and only two had immigration backgrounds (Leuschner et al., 2020).

6.1.4. Criminal responsibility

Leuschner et al. (2020) found that 26 % of individuals wrongfully imprisoned in Germany between 1990 and 2016 were later exonerated based on diminished criminal responsibility. In Switzerland, a study on miscarriages of justice between 1995 and 2004 reported that nearly half (46.4 %) of the accepted review requests based on new evidence stemmed from improper assessments of the convicted individuals' criminal responsibility, as well as from neglecting their mental health issues (Gilliéron, 2012).

However, in the present sample, only three individuals were identified as having diminished criminal responsibility due to insanity. This proportion is substantially lower compared to Germany. While it is possible that fewer judicial errors occur in Spain (relative to Germany) in cases involving individuals with diminished criminal responsibility, other factors may explain this difference. For example, there may have been errors in the original judgments, but those cases were never reopened for further examination or correction. Alternatively, it is possible that some individuals in the current sample had diminished criminal responsibility, but this was not recognized or documented in the court judgments. A report by a Spanish confederation of associations advocating for the rights of individuals with intellectual disabilities supports this latter interpretation (Plena Inclusión, 2020). The report describes a study involving 337 incarcerated individuals with intellectual or developmental disabilities. Of them, 33 % received their disability certification only during imprisonment or after having completed their sentence.

6.1.5. Prior police or criminal record

More than half of the appellants for which this information was available had prior criminal records. This finding is consistent with trends in other countries such as Germany, where 68 % of wrongfully imprisoned individuals had prior convictions (Leuschner et al., 2020), and the United States, where 51 % of the 260 wrongful convictions for violent felonies against a person involved individuals with a criminal history (Gould et al., 2014).

[13] Note that the INE (2024) and the General Council of the Judiciary (CGPJ, 2025b) data do not include non-wrongful convictions only, but all definitive convictions regardless of whether they have been subsequently overturned or not. However, the included wrongful convictions are a negligible subset of all yearly convictions (range for the examined period: 0.00071 % [for 2021] to 0.00918 % [for 2008]). On another matter, it is important to emphasize that, as indicated in the Results section, there is an average time of almost four and a half years between the conviction and the review judgment.

[14] Note that INE (2024) and the General Council of the Judiciary (CGPJ, 2025b) report the number of convicted individuals in each of the following age brackets: 18 to 20 years, 21 to 25, 26 to 30, 31 to 35, 36 to 40, 41 to 50, 51 to 60, 61 to 70, and ≥ 71 years.

[15] Note that, even if all individuals whose citizenship was not reported were assumed to be Spanish, the percentage of wrongfully convicted foreign nationals (28.83 %) would still exceed the percentage of foreign nationals among all convictions reported by the INE and the CGPJ (25.38 %). However, this difference would no longer be statistically significant ($Z = 0.52$, $p = .060$, *Cohen's* $h = 0.08$).

[16] Yet, admittedly, citizenship is not the same thing as ethnicity.

6.2. Characteristics of wrongful conviction cases

6.2.1. Prevalence of wrongful convictions

Considering the number of final convictions issued annually in Spain (CGPJ, 2025b; INE, 2024), it is estimated that there is at least one wrongful conviction for every 22,000 final judgments.[17] The phrase "at least" is used because cases that are reopened and eventually lead to an exoneration represent only the tip of the iceberg (Acker, 2017; Findley & Scott, 2006; Garrett, 2011). Additional cases may exist where individuals do not appeal, either to avoid further legal proceedings or because there is insufficient new evidence or information to reopen the case. Furthermore, appeals may be filed but denied due to a lack of sufficient evidentiary grounds, or cases may be reopened, but the new information fails to prove the individual's innocence.

A methodological limitation may have contributed to a slight underestimation of the false conviction rate. On average, approximately 4.5 years elapsed between conviction and the resolution of the appeal review. Few wrongful conviction cases were identified before 1993. Since the earliest review judgments analyzed were published from 1996 onward, it is likely that cases predating 1993 had already been resolved by 1996. Similarly, it is possible that no Supreme Court judgments regarding review appeals were issued before the end of 2022 (the cut-off date for wrongful convictions in the current study) for an indeterminate number of factually wrongful convictions dated between 2018 and 2022. As a result, the actual wrongful conviction rate for this period may be slightly higher than reported here. Indeed, during the last five years of the study period, the wrongful conviction rate was one or more standard deviations below the average rate calculated between 2007 and 2021. Additionally, the upswing in wrongful convictions observed from 2008 onward could, at least in part, be explained by a substantial increase in the number of convictions during those years, which likely contributed to more judicial errors in absolute terms.[18]

Even so, the rate of wrongful convictions in Spain appears to be lower compared to other countries. In Switzerland, Guilliéron (2012) identified one successful review petition for roughly every 3000 penal orders issued by prosecutors. In the United States, Gross, O'Brien, Hu and Kennedy (2014) reported that 1.6 % of individuals sentenced to death were eventually exonerated; equating to one wrongful conviction for every 64 capital punishment sentences. In contrast, Duce (2015) identified only three successful appeal cases in Chile in 2013, a year in which 230,640 convictions were handed down, indicating one wrongful conviction for every 77,000 cases.

Of note, the proportion of successful appeals (relative to the total number of final judgments during a specific period) is far from a perfect measure of the rate of wrongful convictions. As mentioned earlier, factually innocent individuals may not file an appeal if their case does not meet the legal requirements for doing so, and many appeals by factually innocent individuals may be unsuccessful. Cross-country differences in aspects such as the legally established requirements for admitting a review appeal, the types of evidence admissible in court, and other procedural factors may make the rates of successful appeals in different countries non-comparable. One way to overcome these limitations and obtain more accurate information on the prevalence of wrongful convictions is to survey incarcerated individuals, as done by Loeffler, Jordan, Jordan, and Ridgeway (2018).

Exonerations in Spain increased since 2011 relative to the previous period (1996–2010), with a peak in 2015. The reason for this trend is unclear, however, it is possible that legislative changes and developments in jurisprudence contributed to these results. In 2009, Royal Decree 95/2009, of February 6, a legally binding regulation issued by the Spanish government, was enacted to regulate the Administrative Records System Supporting the Administration of Justice (SIRAJ), with improvements introduced in 2014 by Royal Decree 576/2014, of July 4. This system integrates and unifies various state registers—such as the Central Register of Convicts, the register of precautionary measures, and domestic violence registers—improving communication among judges, police, and other justice professionals. Additionally, in 2011, Law 18/2011, of July 5, on the use of information and communication technologies in the Administration of Justice, promoted the adoption of new technologies, which may have also contributed to an increase in case reopenings. Moreover, since 2010, changes in the yearly reports of the Spanish General Council of the Judiciary may have led to closer scrutiny of cases related to judicial errors.

6.2.2. Most frequent types of crime

In Australia, 55 % of wrongful convictions involve serious violent offenses such as murder, rape, and rape-homicides (Dioso-Villa, 2015). In the United States, 38 % involve murder (National Registry of Exonerations, 2025), and Gross (2008) asserts that 95 % of exonerations are associated with rape and murder cases, which represent only 2 % of all serious crimes in the nation. Consequently, serious crimes are overrepresented among the wrongfully convicted population in Australia and the United States. Conversely, most wrongful convictions in Switzerland are for minor crimes (Gilliéron, 2012).

The current findings indicate that wrongful convictions in Spain are more frequently detected for minor than for serious crimes. Specifically, 75.72 % of wrongful convictions involved crimes against public safety and/or property crimes, while serious crimes such as homicide (1.23 %) or sexual offenses (2.88 %) are relatively rare (Table 3). Furthermore, only 36.21 % of wrongfully convicted individuals received prison sentences, and the most frequent punishment, besides paying court fees, was a fine (46.50 %; Table 2). These findings suggest that, in Spain, wrongful convictions are generally associated with crimes that are not considered serious. However, the type of source used to compile wrongful conviction data (e.g., judgments, media reports, or cases assisted by innocence organizations that might focus primarily on the most serious cases) may influence the types of crimes that are identified and recorded, particularly in terms of their severity.

An analysis was conducted to determine whether certain types of crimes were over- or underrepresented among wrongful conviction cases relative to all definitive convictions in Spain, as reported by the INE (2024) and the CGPJ (2025b). This analysis included only the 163 wrongful conviction cases dated between the years covered by the INE report (i.e., 2007–2022). Z-tests for the comparison of proportions were used without assuming equal population proportions. Due to the limited number of cases in some categories, the analysis was restricted to the most frequent crime types in the sample, as low base rates precluded valid statistical testing for less frequent offenses. As shown in Table 6, crimes against public safety were significantly overrepresented among wrongful convictions, whereas property crimes, assaults, and crimes against the Administration of Justice did not differ significantly from the overall conviction rates.

As shown in Fig. 3, 90 % of cases involving the most frequent crime type in the sample (i.e., public safety crimes) occurred after 2007. This pattern may, in part, reflect the impact of legislative changes and judicial developments. A 2013 judgment by the Spanish Supreme Court (2013) overturned a 2010 conviction for a public safety crime related to driving. This judgment addressed the legal ambiguities arising from the 2007 amendment to the Criminal Code, which established that

[17] If we consider only data from 2007 to 2017 (thus excluding the five subsequent years in which it would still be likely to see additional wrongful convictions, as the average time between conviction and the resolution of a review is about 4.5 years), the rate of wrongful convictions is even higher; specifically, one wrongful conviction for every 18,000 final judgments.

[18] The number of convictions increased from approximately 135,000 in 2007 to around 196,000 in 2008, stabilized at an average of approximately 220,000 ($SD = 3011.76$) between 2009 and 2014. Subsequently, it rose again, reaching an average of roughly 280,000 ($SD = 6428.46$) from 2015 onward, except for 2020, when the COVID-19 pandemic led to a decrease in trials, with 221,437 convictions recorded that year.

Table 6
Z Tests for the Comparison of Proportions Between the Most Common Types of Crimes in Wrongful Conviction Cases and Data from the INE (2024) and the General Council of the Judiciary (CGPJ, 2025b) on Final Convictions in Spain.

Crime Type	Frequency of wrongful convictions[a]	Percentage of wrongful convictions[a]	INE percentage[b]	*Z*	*p* (two tailed)	*Cohen's h*
Against public safety	98	60.12	34.43	5.19	< 0.001	0.52
Against property	36	22.09	27.44	−0.77	0.439	0.12
Against the Justice Administration	12	7.36	5.33	0.27	0.788	0.08
Assault	11	6.75	14.79	−1.06	0.288	0.26

Note. Z tests for the comparison of proportions were calculated according to the formula described in Agresti (2007).
[a] Out of the 163 cases in our dataset dated during the years covered by the Spanish National Statistics Institute's (Instituto Nacional de Estadística, INE, 2024) and the General Council of the Judiciary (CGPJ, 2025b) report (2007–2021).
[b] Reported by the INE (2024) and CGPJ (2025b) report, which covers the 2007–2021 period.

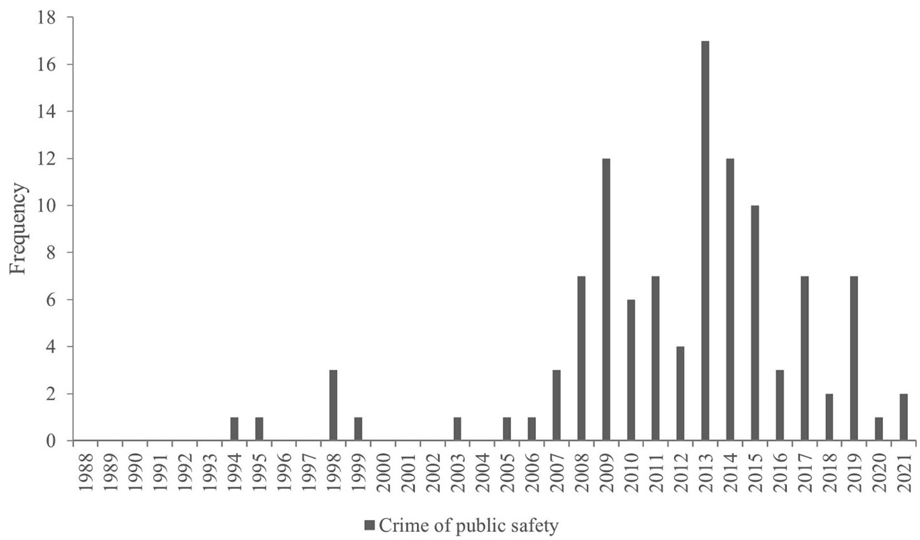

Fig. 3. Temporal Distribution of Crimes Against Public Safety.

operating a vehicle in Spain without ever having obtained a driving license constitutes a criminal offense. However, some courts misinterpreted this law, treating cases involving expired, revoked, or foreign driving licenses not recognized in Spain as criminal offenses. These acts, however, constitute administrative infractions rather than crimes; only driving without *ever* having obtained a license can be considered a crime (this is also in accordance with the current Spanish Criminal Code).

Although the 2007 amendments to the Criminal Code are no longer recent, the frequency of public safety crimes -including driving offenses- remains high (Fig. 3). This ongoing trend suggests that the legal provisions continue to be misinterpreted and may require further clarification to prevent erroneous applications. In addition, improved training for judicial personnel and law enforcement officers appears essential to ensure that legislative changes are implemented accurately and consistently. It is also plausible that factors beyond legal misinterpretation have contributed to the rise in public safety crimes observed since 2008.

One such factor may relate to procedural exceptions in the context of driving offenses. While suspects in Spain generally cannot waive their right to legal counsel during arrest (e.g., González, Masip, & Schell-Leugers, 2024), an exception exists for offenses involving traffic safety. According to Article 520.8 of the Spanish Criminal Prosecution Law, "the arrested or detained individual may waive the right to mandatory legal counsel if their arrest is for acts that can be classified exclusively as crimes against traffic safety." Although the analyzed judgments do not indicate whether defendants in these cases waived their right to legal representation, it is conceivable that some did. This could have left individuals in a more vulnerable legal position. Moreover, when legal counsel is absent, the risk of misapplying the Criminal Code increases, as suspects may not be aware that driving with a foreign or an expired license constitutes only an administrative infraction, not a criminal offense.

6.2.3. *Plea bargain*

In Spain, 71 % of all analyzed wrongful conviction cases for which this information was available resulted from plea agreements. Even under the conservative assumption that no plea agreements were involved in cases lacking this information, the proportion remains high (41.15 %) – notably exceeding that reported in other countries, such as the United States, where approximately 24 % of exonerations involve plea deals (National Registry of Exonerations, 2025). In recent years, around 50 % of urgent proceedings in Spain have been resolved through guilty plea agreements (e.g., General Council of the Judiciary, 2024).[19]

The higher proportion observed in the current study is likely influenced by the fact that the figure is based on all convictions, not only those processed through urgent proceedings. Gazal-Ayal and Tor (2012) argued that innocent individuals are generally reluctant to accept plea agreements; however, this tendency may vary depending on the severity of the offense (Duce & Beltrán, 2024). Reluctance to admit guilt may be more pronounced in cases involving the most severe crimes. Therefore, considering that most wrongful convictions in Spain involved minor crimes, the higher proportion of plea agreements in the current sample (compared to data from the United States, where most wrongful convictions are for serious cases) is unsurprising.

[19] Urgent proceedings in Spain are expedited criminal trials that employ simplified procedures to resolve cases swiftly. This applies to offenses carrying a maximum penalty of less than five years of imprisonment, or, in the case of non-custodial sentences, any penalty with a duration of less than ten years.

Additional factors may also play a role. Defendants might accept plea agreements due to the pressure of facing potentially harsher sentences at trial, to their limited understanding of the long-term consequences, or to the justice system's interest in resolving cases quickly to save time and resources (Varona, Kemp, & Benítez, 2022). In Spain, judges are required to ensure that plea agreements are voluntary and legally valid. However, in practice, judges rarely question the defendant's admission of guilt (Varona et al., 2022). These structural and procedural pressures may contribute to the frequent use of plea agreements in wrongful convictions, besides the limited seriousness of the offenses.

6.3. Factors contributing to wrongful convictions

Judicial errors typically result from a series of mistakes rather than a single isolated error (Berube et al., 2022). In the current dataset, approximately half of the cases ($n = 116$ cases out of the 223 where contributing factors could be identified) involved only one factor. However, because judgments do not always detail every relevant aspect of the case, this number may reflect an underestimation. In the remaining judgments, two contributing factors were identified in 105 cases, three in 11 cases, and four in one case.

The most prevalent factor, found in 73 % of cases, was misconduct by legal professionals. This finding aligns with data from the United States and Australia, where such misconduct was identified in more than half of all wrongful convictions (Dioso-Villa, 2015; National Registry of Exonerations, 2025b). *False confessions* emerged as the second most prevalent factor in the Spanish sample, appearing in 28 % of the cases. In contrast, estimates from the United States, Australia, and Germany range between 13 % and 17 % (Dioso-Villa, 2015; Leuschner et al., 2020; National Registry of Exonerations, 2025b). It is important to note that the present classification of false confessions includes both complete confessions and partial admissions, including plea agreements. In contrast, much of the literature distinguishes between these categories (see, e.g., Kassin & Gudjonsson, 2004). This broader operational definition may account for the higher percentage observed in the Spanish sample.

The proportion of Spanish cases involving the *misapplication of forensic science* (23 %) is broadly comparable to figures reported in other jurisdictions (31 % in Australia, Dioso-Villa, 2015; 29 % in the United States, National Registry of Exonerations, 2025b). Similarly, *eyewitness misidentifications* account for 7 % of wrongful convictions in Spain, a rate similar to that in Australia (6 %; Dioso-Villa, 2015), and somewhat lower than in Germany (16 %; Leuschner et al., 2020). In contrast, the United States shows a notably higher rate, with eyewitness errors contributing to 27 % of wrongful convictions (National Registry of Exonerations, 2025b). Procedural differences between countries may help account for these discrepancies. In Spain, for example, the Criminal Procedure Law prohibits the use of police mugshot identifications as admissible evidence in court. Instead, identifications must be conducted through formal live lineups before an investigative judge and in the presence of an attorney, with various procedural safeguards in place. These stricter protocols may help reduce the incidence of eyewitness misidentifications contributing to wrongful convictions.

Finally, cases reopened due to *false testimonies* are considerably less common in the Spanish data (8 %) compared to rates reported in Australia (17 %; Dioso-Villa, 2015), Germany (39 %; Leuschner et al., 2020), and the United States (64 %; National Registry of Exonerations, 2025b). However, cross-country comparisons should be approached with caution. Legal thresholds for establishing false testimony may be more stringent in Spain than in other jurisdictions. Moreover, as previously noted, significant differences in legal frameworks and research methodologies may further limit the comparability of findings across countries.

6.4. Types of information allowing the reopening of the case

As expected, the existence of new evidence of various kinds was the most common basis for reopening a case. However, only just over 3 % of all cases in the sample were reopened due specifically to DNA evidence. This figure is markedly lower than in the United States, where nearly 17 % of wrongful conviction cases involve DNA-based exonerations (National Registry of Exonerations, 2025a). One likely explanation is that the majority of cases in the Spanish dataset involved minor crimes, where biological evidence is rarely available. Notably, in approximately half of the cases analyzed, it was determined that no crime had actually occurred. This proportion is particularly striking when compared to the United States, where this is observed in only one-third of wrongful conviction cases (Henry, 2018).

6.5. Limitations, strengths, and future research

One limitation of this study is that some judgments contained no information on relevant variables such as the appellant's citizenship, criminal history, or mental health status, which may constrain the generalizability of certain findings. In some cases, the absence of such information may reflect an implicit assumption that the appellant was Spanish and had no prior criminal record or mental health issues. Consequently, conclusions regarding patterns such as the overrepresentation of foreign citizenship among wrongfully convicted individuals should be interpreted as preliminary. Nonetheless, because many judgments explicitly reported the appellant's citizenship—even when they were Spanish—and noted the absence of prior convictions or mental health conditions, it is likely that at least some cases with missing data involved appellants who were foreigners, had prior criminal records, or experienced mental health difficulties. The incomplete reporting of these variables highlights the need for caution when interpreting potential associations between appellant characteristics and the risk of wrongful conviction. More critically, many judgments did not provide a comprehensive account of the case, meaning that some factors contributing to the wrongful conviction may not have been explicitly stated. As a result, the presence of additional, unreported variables, cannot be ruled out. Importantly, this absence of information reflects limitations inherent to the source material (judgments analyzed) rather than the irrelevance or absence of these factors in the cases themselves. Future research could build on these findings by incorporating data from case files (Leuschner et al., 2020), news media reports, and testimonies from both victims and offenders (Dioso-Villa, 2015; Gross et al., 2005), to obtain a fuller picture of each case.

Future research could also examine several variables in greater depth, including subtypes within the legal professional misconduct category (e.g., inadequate legal representation). However, the judgments that we analyzed often lacked sufficient detail to differentiate these subtypes. Research could also focus on specific types of crimes (e.g., "traffic safety violation," "drug trafficking") rather than broader categories such as "crime against public safety," although changes in legal definitions over time may complicate this approach.[20] These considerations underscore the need to examine complementary materials (e.g., trial transcripts, case files, qualitative interviews) to capture all relevant dimensions and improve consistency.

Where possible, percentages were formally compared with data provided by the INE (2024). Nevertheless, future research would benefit from including a control group of randomly selected, factually guilty individuals for comparison (see Garrett, 2008; Gross & O'Brien, 2008; Harmon & Lofquist, 2005). In the Spanish context, Sánchez et al. (2017) implemented this method to examine pretrial detention, comparing individuals who were ultimately acquitted with those who were convicted.

[20] This was one reason why we decided to consider global crime types rather than specific offenses.

Throughout this report, we have drawn comparisons between our results and those of studies conducted elsewhere. However, these cross-jurisdictional comparisons need to be interpreted with caution. Differences in legal frameworks, evidentiary standards, mechanisms for post-conviction review, and the availability of exoneration registries may affect which cases are identified and how they are classified. Consequently, observed differences between Spain and other jurisdictions may reflect structural and procedural factors rather than substantive variations in the occurrence or nature of wrongful convictions.

Despite the limitations associated with relying solely on court judgments, this data source also presents notable strengths: The information provided is typically grounded in legal evidence and reasoning. Furthermore, this study employed a systematic methodology that included the use of a detailed coding manual and ensured high inter-coder reliability. By compiling and systematically describing data on wrongful convictions in a country where no such database exists, this research provides a clear overview of trends and patterns in these cases. These methodological strengths enhance the reliability of the findings and may serve as a model for future research in the area.

Additionally, research in Spain could be expanded to examine judicial errors occurring at other stages of the criminal process. For instance, errors committed in first-instance judgments that are later resolved through ordinary appeal processes could be compared to correctly adjudicated first-instance judgments, or even to the kinds of mistakes examined in this research. Currently, however, such research is constrained by the limited availability of first-instance and appellate judgments in the CENDOJ database.

6.6. Practical implications

Based on the results of this study, the following practical recommendations are proposed.

6.6.1. Recommendation 1: Establishing a public agency for the study of wrongful convictions in Spain

Some countries have national bodies to analyze wrongful convictions (e.g., Criminal Cases Review Commissions in the United Kingdom, the Netherlands and Norway, or the Swiss National Science Foundation). Spain currently lacks a governmental body that systematically records and analyzes wrongful convictions. The current findings highlight the need for the creation of such an institution in Spain. This organization could focus on the systematic study of wrongful convictions, including their characteristics, causes, and contributing factors. It could consist of an independent panel of legal experts, forensic specialists, and social scientists. They would review potential wrongful convictions, maintain a comprehensive national database, and coordinate research and training initiatives. Drawing on international models, the agency could also propose judicial reforms and provide guidance to prevent future miscarriages of justice.

6.6.2. Recommendation 2: Mandatory training for judges, lawyers, and police officers

The current study identified misconduct by legal professionals as the leading cause of wrongful convictions in Spain, accounting for over 70 % of the cases. Therefore, it is essential to implement mandatory training programs for legal professionals addressing the contributing factors and remedies of wrongful convictions. This training should also include periodic updates on the correct application of legislative reforms to prevent misunderstandings or misapplications of the law.

6.6.3. Recommendation 3: No waiving of the right to legal assistance

In Spain, public safety crimes are overrepresented among wrongful convictions, accounting for more than 40 % of cases in the sample. Traffic safety crimes, a subset of public safety offenses, are the only crimes for which individuals can waive their right to legal representation. This may have contributed to wrongful convictions. It is recommended that the right to legal counsel and representation is maintained in all cases, with no exception. Additionally, justice professionals should actively promote and encourage individuals under investigation to seek legal assistance, ensuring that they are fully aware of their legal rights and protections.

6.6.4. Recommendation 4: Ensuring adequate evidence prior to plea agreements, and strict judicial oversight

The current findings reveal that more than 40 % of wrongfully convicted individuals in Spain accepted plea agreements, likely due to defendants' desire to avoid potentially harsher sentences at trial. Judges must carefully assess the voluntariness and validity of these agreements, ensuring that sufficient evidence supports the defendants' guilt before a plea agreement is made (Spanish Criminal Procedure Law, Article 406). Additionally, both judges and lawyers must ensure that the defendant understands the charges against them and the long-term consequences of accepting a plea agreement.

6.6.5. Recommendation 5: Establishing standards for the application of (forensic) science

Improper application of forensic science emerged as the third most frequent factor contributing to wrongful convictions in Spain. To address this issue, it is recommended to establish strict forensic protocols for conducting expert reports. It is also essential to regulate certain forensic disciplines to ensure that all forensic experts possess the necessary training and qualifications. For example, under current Spanish legislation, psychologists without specific training or experience in forensic psychology are permitted to conduct forensic evaluations. Initiatives like Netherlands Register of Court Experts (NRGD) could serve as a model, ensuring that professionals involved in legal evaluations possess the requisite qualifications and expertise. Implementing a similar system in Spain could help standardize the quality of forensic reports, reduce the risk of errors due to inadequately trained professionals, and improve the overall reliability of expert testimony in the judicial process.

6.6.6. Recommendation 6: Allocating sufficient resources to the investigation of minor crimes

In Spain, the majority of wrongful convictions involve minor crimes, particularly public safety and property crimes. To help prevent such wrongful convictions, it is important to implement more thorough and comprehensive investigative procedures for these types of cases. Increased resources should be allocated to investigating minor crimes, ensuring that they are scrutinized with the same rigor as more serious offenses. The relatively low incidence of wrongful convictions for minor crimes in other countries may be due to a lack of motivation or legal support to open such cases. Other nations should also assess the factors contributing to wrongful convictions in minor crimes and explore potential legislative changes to address this issue.

6.6.7. Recommendation 7: Supporting international organizations reviewing wrongful convictions

Supranational bodies, such as the European Registry of Exonerations, are essential for coordinating cross-border research and facilitating the rapid advancement of knowledge about wrongful convictions. Information on effective procedures for preventing wrongful convictions disseminated by these organizations may help create improved international guidelines and protocols. Additionally, international collaboration allows for assistance and training for countries in which the judicial systems are particularly vulnerable to miscarriages of justice.

Although the rate of wrongful convictions in Spain appears lower than in other countries, we must not fall into complacency. The pursuit of excellence in the judicial system demands that we strive to minimize errors as much as possible. A justice system that tolerates even a small number of wrongful convictions is failing in its fundamental duty to protect the innocent. Continued research and reform are necessary to refine our legal processes, enhance the reliability of forensic evidence, and ensure that no innocent person is unjustly deprived of their freedom. As stated by a prosecutor in a conference on the prevention of wrongful convictions, "The question is not one of how many innocents are wrongly convicted, but simply whether we can do better" (quoted by Findley, 2011, p. 1173).

CRediT authorship contribution statement

Nuria Sánchez: Writing – original draft, Visualization, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Guadalupe Blanco-Velasco:** Writing – review & editing, Investigation, Data curation. **Linda M. Geven:** Writing – review & editing, Conceptualization. **Jaume Masip:** Writing – review & editing, Conceptualization. **Antonio L. Manzanero:** Writing – review & editing, Methodology, Investigation, Data curation, Conceptualization.

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References

Acker, J. R. (2017). Taking stock of innocence: Movements, mountains, and wrongful convictions. *Journal of Contemporary Criminal Justice, 33*(1), 8–25. https://doi.org/10.1177/1043986216673008

Acker, J. R., & Wu, S. (2019). I did it, but… I didn't: When rejected affirmative defenses produce wrongful convictions. *Nebraska Law Review, 98*(3), 578–642.

Aebi, M. F., & Campistol, C. (2013). "Voluntary" false confessions as a source of wrongful convictions: The case of Spain. In C. R. Huff, & M. Killians (Eds.), *Wrongful convictions and miscarriages of justice: Causes and remedies in North America and European criminal justice systems*. Routledge. https://doi.org/10.4324/9780203597286.

Agresti, A. (2007). An introduction to categorical data analysis. *Willey*. https://doi.org/10.1002/0470114754

Ask, K., & Fahsing, I. (2019). Investigative decision making. In R. Bull, & I. Blandón-Gitlin (Eds.), *The Routledge international handbook of legal and investigative psychology* (pp. 84–101). Routledge. https://doi.org/10.4324/9780429326530.

Beltrán Calfurrapa, R. (2024). Miscarriage of justice and expert evidence on the credibility of children's testimony: Some issues regarding its use in Chile and Spain. *The International Journal of Evidence & Proof, 1-19*. https://doi.org/10.1177/13657127241253019

Benton, T. R., Ross, D. F., Bradshaw, E., Thomas, W. N., & Bradshaw, G. S. (2006). Eyewitness memory is still not common sense: Comparing jurors, judges and law enforcement to eyewitness experts. *Applied Cognitive Psychology, 20*(1), 115–129. https://doi.org/10.1002/acp.1171

Berube, R., Wilford, M. M., Redlich, A. D., & Wang, Y. (2022). Identifying patterns across the six canonical factors underlying wrongful convictions. *Wrongful Conviction Law Review, 3*(3), 166–195. https://doi.org/10.29173/wclawr82

Blanco-Velasco, G., Sánchez, N., & Geven, L. M. (2023). Miscarriages of justice in Spain. In J. Robins (Ed.), *Murder, wrongful conviction and the law: An international comparative analysis* (pp. 122–135). Routledge. https://doi.org/10.4324/9781003251484.

Law 18/2011, of July 5, reguladora del uso de las tecnologías de la información y la comunicación en la Administración de Justicia [on the use of information and communication technologies in the Administration of Justice]. *Boletín Oficial del Estado, 160*.(2011). https://www.boe.es/buscar/act.php?id=BOE-A-2011-11605.

Brants, C. (2012). Wrongful convictions and inquisitorial process: The case of the Netherlands. *University of Cincinnati Law Review, 80*, 1069–1114.

Burrows, J., Hopkins, M., Hubbard, R., Robinson, A., Speed, M., & Tilley, N. (2005). Understanding the attrition process in volume crime investigations. *Home Office*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachmentdata/file/115828/hors295.pdf.

Canadian Registry of Wrongful Convictions. (2025, July 9). Wrongful convictions data visualized. https://www.wrongfulconvictions.ca/data.

Carlson, C. A., Young, D. F., Weatherford, D. R., Carlson, M. A., Bednarz, J. E., & Jones, A. R. (2016). The influence of perpetrator exposure time and weapon presence/timing on eyewitness confidence and accuracy. *Applied Cognitive Psychology, 30*(6), 898–910. https://doi.org/10.1002/acp.3275

CGPJ. (2015). La justicia dato a dato 2014: Estadística judicial [Justice datum by datum 2014: Judicial statistics]. https://www.poderjudicial.es/stfls/ESTADISTICA%20JUDICIAL%20NUEVO/FICHEROS/JusticaDatoaDato/Datos%20Anteriores/Justicia%20Dato%20a%20Dato%20A%C3%B1o%202014.pdf.

CGPJ. (2020). La justicia dato a dato 2019: Estadística judicial [Justice datum by datum 2018: Judicial statistics]. https://www.poderjudicial.es/stfls/ESTADISTICA/FICHEROS/JusticaDatoaDato/Datos%20Anteriores/Justicia%20Dato%20a%20Dato%202019.pdf.

CGPJ. (2025a). La justicia dato a dato 2024: Estadística judicial [Justice datum by datum 2024: Judicial statistics]. https://www.poderjudicial.es/stfls/ESTADISTICA/FICHEROS/JusticaDatoaDato/Justicia%20Dato%20a%20Dato%202024.pdf.

CGPJ. (2025, April 1). Datos penales, civiles y laborales [Criminal, civil and labor data]. https://www.poderjudicial.es/cgpj/es/Temas/Estadistica-Judicial/Estadistica-por-temas/Datos-penales--civiles-y-laborales/Delitos-y-condenas/Condenados--explotacion-estadistica-del-Registro-Central-de-Penados.

Clow, K. A. (2017). Does the "wrongful" part of wrongful conviction make a difference in the job market? In R. Ricciardelli, & A. M. F. Peters (Eds.), *After prison: Navigating employment and reintegration* (pp. 243–257). Wilfred Laurier University Press. https://doi.org/10.51644/9781771123174-012.

Covey, R. (2012). Police misconduct as a cause of wrongful convictions. *Washington University Law Review, 90*(4), 1133–1189. https://openscholarship.wustl.edu/law_lawreview/vol90/iss4/2.

Criminal Cases Review Commission. (2025, July 9). Facts and figures. https://ccrc.gov.uk/facts-figures/.

De Swert, K. (2012). *Calculating inter-coder reliability in media content analysis using Krippendorff's alpha*. University of Amsterdam. https://www.polcomm.org/wp-content/uploads/ICR01022012.pdf.

Devine, D. J., & Caughlin, D. E. (2014). Do they matter? A meta-analytic investigation of individual characteristics and guilt judgments. *Psychology, Public Policy, and Law, 20*(2), 109–134. https://doi.org/10.1037/law0000006

Dioso-Villa, R. A. (2015). Repository of wrongful convictions in Australia: First steps toward estimating prevalence and causal contributing factors. *Flinders Law Journal, 17*(2), 163–202.

Drizin, S. A., & Leo, R. A. (2004). The problem of false confessions in the post-DNA world. *North Carolina Law Review, 82*(3), 891–1004.

Dror, I. E. (2020). Cognitive and human factors in expert decision making: Six fallacies and the eight sources of bias. *Analytical Chemistry, 92*(12), 7998–8004. https://doi.org/10.1021/acs.analchem.0c00704

Dror, I. E., Melinek, J., Arden, J. L., Kukucka, J., Hawkins, S., Carter, J., & Atherton, D. S. (2021). Cognitive bias in forensic pathology decisions. *Journal of Forensic Sciences, 66*(5), 1751–1757. https://doi.org/10.1111/1556-4029.14697

Duce, M. (2013). ¿Debiéramos preocuparnos de la condena de inocentes en Chile?: Antecedentes comparados y locales Para el debate [should we be concerned about the conviction of innocent people in Chile?: Comparative and local background for the debate]. *Ius et Praxis, 19*(1), 77–138. https://doi.org/10.4067/S0718-00122013000100004

Duce, M. (2015). The conviction of innocents in Chile: An empirical approximation from the results of wrongful conviction claims admitted by the supreme Court during the 2007-2013 period. *Política Criminal, 10*(19), 159–191.

Duce, M., & Beltrán, V. (2024). Examining wrongful convictions in Chile: An analysis of supreme Court exonerations in 2007 to 2023. *Crime & Delinquency. Advance online publication.*. https://doi.org/10.1177/00111287241301007

Enescu, R. (2023). Wrongful convictions in summary proceedings: A comparison of penal orders in France, Germany, and Switzerland. *Monatsschrift für Kriminologie und Strafrechtsreform, 106*(3), 184–196. https://doi.org/10.1515/mks-2023-0019

EUREX. (2025). The European registry of exonerations. https://www.registryofexonerations.eu/.

Findley, K. A. (2011). Defining innocence. *Albany Law Review, 74*(3), 1157–1208. https://doi.org/10.2139/ssrn.1815304

Findley, K. A., & Scott, M. S. (2006). The multiple dimensions of tunnel vision in criminal cases. *Wisconsin Law Review, 2*, 291–397.

Fleiss, J. L., Levin, B., & Paik, M. C. (2003). Statistical methods for rates and proportions. *Wiley*. https://doi.org/10.1002/0471445428

Garrett, B. L. (2008). Judging innocence. *Columbia Law Review, 108*(1), 55–142.

Garrett, B. L. (2011). *Convicting the innocent: Where criminal prosecutions go wrong*. Harvard University Press.

Garrett, B. L. (2017). Convicting the innocent redux. In D. S. Medwed (Ed.), *Wrongful convictions and the DNA revolution: Twenty-five years of freeing the innocent (pp. 40–56)*. Cambridge University Press. https://doi.org/10.1017/9781316417119.004.

Gazal-Ayal, O., & Tor, A. (2012). The innocence effect. *Duke Law Journal, 62*(2), 339–402. https://doi.org/10.2139/ssrn.1878498

Godsey, M. (2017). *Blind injustice*. University of California Press.

González, J. L., Masip, J., & Schell-Leugers, J. M. (2024). Police interviewing in Spain: Gathering information from suspects, witnesses, and victims. In D. Walsh, R. Bull, & I. Areh (Eds.), *Routledge international handbook of investigative interviewing and interrogation* (pp. 75–91). Routledge. https://doi.org/10.4324/9781003424444-8.

Gould, J. B., Carrano, J., Leo, R. A., & Hail-Jares, K. (2014). Predicting erroneous convictions. *Iowa Law Review, 99*(2), 471–522.

Gould, J. B., & Leo, R. A. (2010). One hundred years later: Wrongful convictions after a century of research. *The Journal of Criminal Law & Criminology, 100*(3), 825–868.

Gross, S. R. (2008). Convicting the innocent. *Annual Review of Law and Social Science, 4*, 173–192. https://doi.org/10.1146/annurev.lawsocsci.4.110707.172300

Gross, S. R., Jacoby, K., Matheson, D. J., Montgomery, N., & Patil, S. (2005). Exonerations in the United States 1989 through 2003. *Journal of Criminal Law & Criminology, 95*(2), 523–560.

Gross, S. R., & O'Brien, B. (2008). Frequency and predictors of false conviction: Why we know so little, and new data on capital cases. *Journal of Empirical Legal Studies, 5*(4), 927–962. https://doi.org/10.1111/j.1740-1461.2008.00146.x

Gross, S. R., O'Brien, B., Hu, C., & Kennedy, E. H. (2014). Rate of false conviction of criminal defendants who are sentenced to death. *Proceedings of the National Academies of Sciences, 111*(20), 7230–7235. https://doi.org/10.1073/pnas.1306417111

Gudjonsson, G. H. (2018). The psychology of false confessions: Forty years of science and practice. *Wiley*. https://doi.org/10.1002/9781119315636

Guilliéron, G. (2012). Wrongful convictions in Switzerland: A problem of summary proceedings. *University of Cincinnati Law Review, 80*(4), 1145–1166.

Gullón, M. A. (2017). El recurso de revisión tras la reforma de la Ley 41/2015. https://www.fiscal.es/documents/20142/100406/Ponencia+Gull%C3%B3n+RECURSO+DE+REVISION.pdf.

Harmon, T. R., & Lofquist, W. S. (2005). Too late for luck: A comparison of post-Furman exonerations and executions of the innocent. *Crime & Delinquency, 51*(4), 498–520. https://doi.org/10.1177/0011128705275977

Helm, R. K. (2022). Wrongful conviction in England and Wales: An assessment of successful appeals and key contributors. *Wrongful Conviction Law Review, 3*(3), 196–217. https://doi.org/10.29173/wclawr79

Henry, J. S. (2018). Smoke but no fire: When innocent people are wrongly convicted of crimes that never happened. *American Criminal Law Review, 55*, 665–703.

Henry, T. D., Blanco-Velasco, G., Cardoso, C., Hamilton, K. M., & Clow, K. A. (2025). Are they synonyms? A review of the use of the terms innocence, miscarriages of justice, wrongful conviction, and exoneration. *Psychology, Public Policy, and Law*. https://doi.org/10.1037/law0000468. Advance online publication.

Herrero, C. (2021). Los conocimientos de la psicología más allá de la prueba pericial [Psychological knowledge beyond expert evidence]. *Quaestio Facti. Revista Internacional sobre Razonamiento Probatorio, 2*, 363–408. https://doi.org/10.33115/udg_bib/qf.i2.22533

Houston, K. A., Hope, L., Memon, A., & Read, J. D. (2013). Expert testimony on eyewitness evidence: In search of common sense. *Behavioral Sciences & the Law, 31*(5), 637–651. https://doi.org/10.1002/bsl.2080

Huff, C. R. (2004). Wrongful convictions: The American experience. *Canadian Journal of Criminology and Criminal Justice, 46*(2), 107–120. https://doi.org/10.3138/cjccj.46.2.107

Hughes, J. (2021). Krippendorffsalpha: An R package for measuring agreement using Krippendorff's alpha coefficient. *The R Journal, 13*(1), 413–425. https://doi.org/10.32614/RJ-2021-046

Hunt, P. E., Saunders, J., & Kilmer, B. (2019). Estimates of law enforcement costs by crime type for benefit-cost analyses. *Journal of Benefit Cost Analysis, 10*(1), 95–123. https://doi.org/10.1017/bca.2018.19

INE. (2024). Estadística de condenados: Adultos [Statistics of convicted individuals: Adults] [Data set]. https://www.ine.es/dynt3/inebase/index.htm?padre=4016&capsel=4016.

Innocence Project. (2023). DNA exonerations in the United States (1989-2020). https://innocenceproject.org/dna-exonerations-in-the-united-states/.

Jenkins, S. (2013). Secondary victims and the trauma of wrongful conviction: Families and children's perspectives on imprisonment, release and adjustment. *Journal of Criminology, 46*(1), 119–137. https://doi.org/10.1177/0004865812470384

Joy, P. A. (2006). The relationship between prosecutorial misconduct and wrongful convictions: Shaping remedies for a broken system. *Wisconsin Law Review, 2006*, 399–431. https://ssrn.com/abstract=948307.

Kassin, S. M. (2022). *Duped: Why innocent people confess—And why we believe their confessions*. Prometheus Books.

Kassin, S. M., Drizin, S. A., Grisso, T., Gudjonsson, G. H., Leo, R. A., & Redlich, A. D. (2010). Police-induced confessions: Risk factors and recommendations. *Law and Human Behavior, 34*(1), 3–38. https://doi.org/10.1007/s10979-009-9188-6

Kassin, S. M., & Gudjonsson, G. H. (2004). The psychology of confessions: A review of the literature and issues. *Psychological Science in the Public Interest, 5*(2), 33–67. https://doi.org/10.1111/j.1529-1006.2004.00016.x

Kassin, S. M., Tubb, V. A., Hosch, H. M., & Memon, A. (2001). On the «general acceptance» of eyewitness testimony research: A new survey of the experts. *American Psychologist, 56*(5), 405–416. https://doi.org/10.1037/0003-066X.56.5.405

Katzman, J., & Kovera, M. B. (2023). Potential causes of racial disparities in wrongful convictions based on mistaken identifications: Own-race bias and differences in evidence-based suspicion. *Law and Human Behavior, 47*(1), 23–35. https://doi.org/10.1037/lhb0000503

Köhnken, G., Manzanero, A. L., & Scott, M. T. (2015). Análisis de la validez de las declaraciones: mitos y limitaciones [Statement validity assessment: Myths and limitations]. *Anuario de Psicología Jurídica, 25*(1), 13–19. https://doi.org/10.1016/j.apj.2015.01.004

Kukucka, J., Clow, K. A., Horodysky, A. M., Deegan, K., & Gayleard, N. M. (2021). Do exonerees face housing discrimination? An email-based field experiment and content analysis. *Psychology, Public Policy, and Law, 27*(4), 570–580. https://doi.org/10.1037/law0000323

Kukucka, J., Horodyski, A. M., & Dardis, C. M. (2022). The Exoneree health and life experiences (ExHaLE) study: Trauma exposure and mental health among wrongly convicted individuals. *Psychology, Public Policy, and Law, 28*(3), 387–399. https://doi.org/10.1037/law0000358

Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics, 33*(1), 159–174. https://doi.org/10.2307/2529310

Leo, R. A. (2017). The criminology of wrongful conviction: Decade later. *Journal of Contemporary Criminal Justice, 33*(1), 82–106. https://doi.org/10.1177/1043986216673013

Leuschner, F., Rettenberger, M., & Dessecker, A. (2020). Imprisoned but innocent: Wrongful convictions and imprisonments in Germany, 1990-2016. *Crime & Delinquency, 66*(5), 687–711. https://doi.org/10.1177/0011128719833355

Lindsay, R. C. L., Semmler, C., Weber, N., Brewer, N., & Lindsay, M. R. (2008). How variations in distance affect eyewitness reports and identification accuracy. *Law and Human Behavior, 32*(6), 526–535. https://doi.org/10.1007/s10979-008-9128-x

Loeffler, E., Jordan, C., Jordan, H., & Ridgeway, G. (2018). Measuring self-reported wrongful convictions among prisoners. *Journal of Quantitative Criminology, 35*(2), 259–286. https://doi.org/10.1007/s10940-018-9381-1

Lucas, J. W., Graif, C., & Lovaglia, M. J. (2006). Misconduct in the prosecution of severe crimes: Theory and experimental test. *Social Psychology Quarterly, 69*(1), 97–107. https://doi.org/10.1177/019027250606900107

Lupária, L. (2020). Unveiling wrongful convictions between the U.S. and Italy: Cross-learning from each other's mistakes. *Wrongful Conviction Law Review, 1*(1), 101–123. https://doi.org/10.29173/wclawr12

Manzanero, A. L., Alanzavez, A., Ferrer Beltrán, J., & Vázquez, C. (2025). Falsas Creencias sobre la memoria de los testigos en profesionales y estudiantes de ciencias sociales y jurídicas [false beliefs about witness memory among professionals and students in social and legal sciences]. *Quaestio Facti. Revista Internacional Sobre Razonamiento Probatorio, 8*, 219–237. https://doi.org/10.33115/udg_bib/qf.i8.23029

Masip, J., Garrido, E., & Herrero, C. (2004). Defining deception. *Anales de Psicología, 20*(1), 147–171.

Meissner, C. A., & Brigham, J. C. (2001). Thirty years of investigating the own-race bias in memory for faces: A meta-analytic review. *Psychology, Public Policy, and Law, 7*(1), 3–35. https://doi.org/10.1037/1076-8971.7.1.3

National Registry of Exonerations. (2025a). *Instructions for using the map.* https://exonerationregistry.org/Exonerations-in-the-United-States-Map#crimeState.

National Registry of Exonerations. (2025b). % Exonerations by contributing factor. https://www.law.umich.edu/special/exoneration/Pages/ExonerationsContribFactorsByCrime.aspx.

Norris, R. J., & Mullinix, K. J. (2020). Framing innocence: An experimental test of the effects of wrongful convictions on public opinion. *Journal of Experimental Criminology, 16*(2), 311–334. https://doi.org/10.1007/s11292-019-09360-7

Norris, R. J., Weintraub, J. N., Acker, J. R., Redlich, A. D., & Bonventre, C. L. (2020). The criminal costs of wrongful convictions. *Criminology & Public Policy, 19*(2), 367–388. https://doi.org/10.1111/1745-9133.12463

Nyman, T. J., Lampinen, J. M., Antfolk, J., Korkman, J., & Santtila, P. (2019). The distance threshold of reliable eyewitness identification. *Law and Human Behavior, 43*(6), 527–541. https://doi.org/10.1037/lhb0000342

Ortiz-Pradillo, J. C. (2023). Compensation for wrongful convictions in Spain. In W. Jasinski, & K. Kremens (Eds.), *Compensation for wrongful convictions: A comparative perspective* (pp. 70–86). Routledge. https://doi.org/10.4324/9781003229414-5.

Plena Inclusión. (2020). A cada lado: Informe sobre la situación de personas con discapacidad intelectual reclusas y exreclusas en España [on either side: Report on the situation of prisoners and former prisoners with intellectual disabilities in Spain]. https://www.plenainclusion.org/wp-content/uploads/2021/03/plena_inclusion._a_cada_lado._2020.pdf.

Redlich, A. D. (2010). False confessions, false guilty pleas: Similarities and differences. In G. D. Lassiter, & C. A. Meissner (Eds.), *Police interrogations and false confessions: Current research, practice, and policy recommendations* (pp. 49–66). American Psychological Association. https://doi.org/10.1037/12085-003.

Robins, J. (2023). Murder, wrongful conviction and the law: An international comparative analysis. *Routledge*. https://doi.org/10.4324/9781003251484

Royal Decree 576/2014, of July 4, por el que se modifica el real Decreto 95/2009, de 6 de febrero, por el que se regula el Sistema de registros administrativos de apoyo a la Administración de Justicia [amending Royal Decree 95/2009, of February 6, wich regulates the administrative records system supporting the Administration of Justice]. *Boletín Oficial del Estado, 173*.(2014). https://www.boe.es/buscar/doc.php?id=BOE-A-2014-7573.

, 33. Royal Decree 95/2009, of February 6, por el que se regula el Sistema de registros administrativos de apoyo a la Administración de Justicia [regulating the administrative records system supporting the Administration of Justice]. (2009). Boletín Oficial del Estado. https://www.boe.es/buscar/act.php?id=BOE-A-2009-2073&b=3&tn=1&p=20090207#a1.

Sánchez, N., Blanco-Velasco, G., Geven, L. M., Masip, J., & Manzanero, A. L. (2024). Wrongful convictions with prison sentences in Spain: Exoneree characteristics, crime types, and contributing factors. *Wrongful Conviction Law Review, 5*(1), 8–26. https://doi.org/10.29173/wclawr115

Sánchez, N., Sobral, J., & Seijo, D. (2017). Judicial error in preventive prison: People in prison who will never be convicted. *Revista Iberoamericana de Psicología y Salud, 8*(1), 36–43. https://doi.org/10.23923/j.rips.2017.08.004

Schell-Leugers, J. M., Masip, J., González, J. L., Vanderhallen, M., & Kassin, S. M. (2023). Police interviewing in Spain: A self-report survey of police practices and beliefs. *Anuario de Psicología Jurídica, 33*(1), 27–40. https://doi.org/10.5093/apj2022a4

Schuller, R. A., Clow, K. A., & Erentzen, C. (2021). Twenty years for nothing: An exploration of wrongful conviction cases in Canada. *Criminal Law Quarterly, 69*(1), 110–147.

Scott, M. T., Manzanero, A. L., Muñoz, J. M., & Köhnken, G. (2014). Admisibilidad en contextos forenses de indicadores clínicos Para la detección del abuso sexual infantil [admissibility of clinical indicators for the detection of child sexual abuse in forensic contexts]. *Anuario de Psicología Jurídica, 24*(1), 57–63. https://doi.org/10.1016/j.apj.2014.08.001

Smith, E., & Hattery, A. J. (2011). Race, wrongful conviction & exoneration. *Journal of African American Studies, 15*(1), 74–94. https://doi.org/10.1007/s12111-010-9130-5

Spanish Supreme Court. (2013, June 20). Judgment No. 507/2013. Supreme Court Reports. https://www.poderjudicial.es/search/AN/openDocument/045e3e02e2ccefc3/20130708.

Sporer, S. L. (2008). Lessons from the origins of eyewitness testimony research in Europe. *Applied Cognitive Psychology, 22*(6), 737–757. https://doi.org/10.1002/acp.1479

Varona, D., & Kemp, S. (2020). Suspended sentences in Spain: An alternative to prison or a "bargaining chip" in plea negotiations? *European Journal of Crime, Criminal Law and Criminal Justice, 28*, 354–378. https://doi.org/10.1163/15718174-bja10010

Varona, D., Kemp, S., & Benítez, O. (2022). La conformidad en España: Predictores e impacto en la penalidad [Plea bargaining in Spain: Predictors and impact on sentencing]. *InDret, 1*, 307–336. https://doi.org/10.31009/InDret.2022.i1.07

Wells, G. L. (1978). Applied eyewitness-testimony research: System variables and estimator variables. *Journal of Personality and Social Psychology, 36*(12), 1546–1557. https://doi.org/10.1037/0022-3514.36.12.1546

Wells, G. L., Kovera, M. B., Douglass, A. B., Brewer, N., Meissner, C. A., & Wixted, J. T. (2020). Policy and procedure recommendations for the collection and preservation of eyewitness identification evidence. *Law and Human Behavior, 44*(1), 3–36. https://doi.org/10.1037/lhb0000359

West, E., & Meterko, V. (2015). DNA exonerations 1989-2014: Review of data and findings from the first 25 years. *Albany Law Review, 79*(3), 717–795.

Yaroshefsky, E., & Schaefer, L. (2014). Defense lawyering and wrongful conviction. In A. D. Redlich, J. A. Acker, R. J. Norris, & C. L. Bonventre (Eds.), *Examining wrongful convictions: Stepping back, moving forward* (pp. 123–140). Carolina Academic Press.