

Communication disorders in the correctional system: a systematic review

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ABSTRACT

Objectives: Good communication is essential for resolving social conflicts, especially in closed communities such as prisons. When communication is interrupted by factors such as hearing loss or difficulties in coordination, voice, language, fluency, or disruption of any of the biological systems required to communicate, Human Communication Disorders can appear. This review aimed to identify the most prevalent communication disorders amongst prison inmates.

Material and method: Systematic review through databases of studies that analyze individual inmates with communication disorders over the last 38 years. After reading the titles and abstracts and applying the eligibility criteria, 25 articles were selected and included in the final review.

Results: A sample of 2,188 individuals was evaluated, two studies were conducted with a female population only, while twelve studied exclusively males, and 11 articles had a mixed population. All the studies included evaluated language and communication disorders in general, with language impairment being more prevalent. There are no English language studies evaluating language and communication disorders in incarcerated individuals from African countries, Latin America or Asia.

Discussion: Inmates have a high prevalence of language and communication disorders, and thus end up being more vulnerable within the prison system. Speech therapists are important members of the legal workforce and improve the health, well-being and participation of people in contact with or at risk of contact with the judicial system through the prevention, early detection, assessment and treatment of communication disorders.

Key words: prisons; rights of prisoners; criminal law; social justice; criminals; communication disorders; language disorders.

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INTRODUCTION

Most individuals develop language and communication skills that are utilized with little apparent effort. In most cases, occasional miscommunication or misinterpretation is easily corrected, but for some individuals, however, communication may be disrupted by factors such as hearing loss or difficulties with articulation, voice, language, fluency or disruption of some of the diverse biological systems required for communication, thus causing what are known as Human Communication Disorders¹.

Good communication is essential for resolving social conflicts, especially in a closed community such

as a prison. However, we have observed that language and communication disorders are more frequent among prison inmates than in the general population, reducing their problem-solving ability and increasing conflicts.

Social communication is often the area in which problems are initially recognized because a lack of social-communicative skills prevents a child from having normal social interactions with family, peers, and other adults².

People who engage in activities considered illegal, usually have a history characterized by learning difficulties, poor academic performance, and high levels of school dropout³. Speaking and listening skills are

necessary for individuals who have problems with the law to handle the legal system's demands and to participate in educational programs designed to reduce recidivism⁴.

Beitchman et al. suggest that communication difficulties tend to be interpreted by educators as school conduct problems⁵. Whitmire observed that adolescents with language disorders are vulnerable to problems in developing relationships with their peers and family members, as well as meeting school expectations⁶. Difficulty in language development has been associated with a higher risk of getting involved in criminal activities⁷. About 90% of young people who have committed infractions have some kind of language disorder, compared to 7.5% of the general population⁸.

Children with early language impairment had significantly higher rates of anxiety disorder in young adulthood when compared to unimpaired children. The majority of participants with anxiety disorders had a diagnosis of social phobia⁹. In 2010, the Royal College of Speech and Language Therapists held a conference at the Polmont Young Offenders Institute, attended by 55 participants, including young offenders, professionals, and organizations working in the criminal justice system in Scotland, and found that 100% of participants agree that "speech, language, and communication needs are a problem in the criminal justice system"¹⁰. It has been reported that 28-38% of young offenders have communication disorders and have difficulties in understanding their rights³.

Communication disorders in adults are clearly associated with poor general educational performance in some individuals with reading and learning disabilities and other special education problems. Adults with speech and hearing disorders should be treated.

An individual who has a severe communication impairment may find it difficult to maintain or even acquire a job while on probation¹¹.

In general, the prison population is growing along with its health and communication needs. The impact of any communication disorder that affects an individual's ability to understand, detect, or apply language and speech to effectively engage in discourse can lead to a variety of conflicts. The aim of this review, therefore, is to analyze and identify the most prevalent communication disorders in individuals deprived of liberty. With this, we will demonstrate the importance of research in the penitentiary system, generate new incentives, programs and future research.

MATERIAL AND METHOD

A systematic review was carried out, based on the guidelines and main items to report systematic reviews and meta-analyses (PRISMA). The PRISMA Statement consists of a 27-item checklist and a four-phase flow. The aim of the Statement is to help authors improve the reporting of systematic reviews and meta-analyses¹².

In this systematic literature review, electronic databases (Medline, SciELO and LILACS) were searched, and a manual search was performed of all studies published in all languages from 1983 to December 2021. The selection of key words: prisons, rights of prisoners, criminal law, social justice, criminals, communication disorders and language disorders, was made using controlled language in DeCS and MeSH, thus obtaining the results shown in Table 1.

Inclusion criteria: studies that evaluate prison inmates with communication disorders. Exclusion

Table 1. Relevant DeCS and MeSH terms and descriptors.

Relevant terms			
MeSH		DeCS	
Spanish	Inglés	Spanish	Inglés
Prisiones	<i>Prisons</i>	Prisiones	<i>Prisons</i>
Derechos de los prisioneros	<i>Rights of prisoners</i>	Derechos de los prisioneros	<i>Rights of prisoners</i>
Derecho penal	<i>Criminal law</i>	Derecho penal	<i>Criminal law</i>
Justicia social	<i>Social justice</i>	Justicia social	<i>Social justice</i>
Criminales	<i>Criminals</i>	Criminales	<i>Criminals</i>
Trastornos de la comunicación	<i>Communication disorders</i>	Trastornos del lenguaje	<i>Communication disorders</i>
Trastornos del lenguaje	<i>Language disorders</i>	Trastornos del lenguaje	<i>Language disorders</i>

Note. *DeCS: Descriptors in Health Sciences; †MeSH: Medical Subject Headings.

Table 2. Search equation.

Database	Search equation	All articles	Selected
PubMed	(((((("prisons"[MeSH Terms] OR "prisons"[All Fields]) OR (rights[All Fields] AND ("prisoners"[MeSH Terms] OR "prisoners"[All Fields]))) OR ("criminal law"[MeSH Terms] OR ("criminal"[All Fields] AND "law"[All Fields]) OR "criminal law"[All Fields])) OR ("social justice"[MeSH Terms] OR ("social"[All Fields] AND "justice"[All Fields]) OR "social justice"[All Fields])) OR ("criminals"[MeSH Terms] OR "criminals"[All Fields])) AND ("communication disorders"[MeSH Terms] OR ("communication"[All Fields] AND "disorders"[All Fields]) OR "communication disorders"[All Fields])) OR ("language disorders"[MeSH Terms] OR ("language"[All Fields] AND "disorders"[All Fields]) OR "language disorders"[All Fields]))	1642	22
SciELO	(Rights of prisoners) OR (criminal law) OR (social justice) OR (criminals) AND (communication disorders) OR (language disorders)	114	2
LILACS	Rights of prisoners) OR (criminal law) OR (social justice) OR (criminals) AND (communication disorders) OR (language disorders)	127	1

criteria: reviews, animal studies and those that do not address the topic of interest.

The MeSH and DeCS terms were united with the Boolean operators AND and OR: "prisons" OR "prisoners" OR "Rights of prisoners" OR "criminal law" OR "social justice" OR "criminals" AND "communication disorders" OR "language disorders". Different searches in databases were performed with the search equation as shown in Table 2.

Assessment of the methodological quality of the included studies was assessed using the Strengthening the Reporting of Observational Studies in Epidemiology. The STROBE Statement is a 22-item checklist that we consider essential for good reporting of observational studies. These items refer to the title of the article and item 1 of the abstract, the introduction (items 2 and 3), methods (items 4 to 12), results (items 13 to 17) and discussion sections (items 18 to 21) and other information (point 22 on financing). 18 items are common to the three designs, while four (items 6, 12, 14, and 15) are design-specific, with different versions for all or part of the item¹³.

The STROBE scores were transformed into percentages to better assess the quality of the articles. Three categories were established for quality assessment: high when the study met more than 80% of the established criteria; medium when 50 to 80% of the criteria were met; and low when less than 50% of the criteria were met. All results from the included studies were specified and presented, regardless of the extraction procedure and variables included.

RESULTS

After placing the descriptors in the Medline, Lilacs and Scielo databases, 1,983 articles were found. After reading their titles and abstracts and applying the eligibility criteria, the review included 25 articles, with 6 countries of origin, published between 1983 and 2021. A sample of 2,188 individuals was evaluated, two studies were conducted with a female population only, while twelve studied exclusively males, and 10 articles had a mixed population. The studies were heterogeneous with a population ranging from 4 to 390 participants. Table 3 summarizes the characteristics of the included studies.

Figure 1 describes the identification, evaluation, eligibility, and selection of the articles included in the review.

Language and communication disorders

All included studies evaluated language and communication disorders in general, with language impairment being more prevalent. They found that 81% of their samples had a language disorder, and they also revealed the inefficiency of the correctional system in properly evaluating these people²⁰.

Most of the articles analyzed demonstrate that Attention-deficit/hyperactivity disorder (ADHD) and Autism Spectrum Disorder (ASD) are the most frequent diseases amongst inmates with language disorders, and treatment varies according to the country in which the research was carried out. It was reported that 43% of the sample of 270 individuals in

Table 3. Characteristics of the studies.

Title	Authors	Year	Country of origin	SS‡	Sex	Age	Assessment scale	Disorder	Q.E.*
An ecological model approach to language disorder and lived experience of young male offenders	Fitzsimons D, y Clark A. ¹⁴	2021	United Kingdom	9	M	20;1	The Clinical Evaluation of Language Fundamentals® - Fourth Edition	Language disorder (44%)	High
Speech and language therapy for adolescents in youth justice: A series of empirical single-case studies	Swain NR, et al. ¹⁵	2020	Australia	4	M	18;1 - 17;6 - 18;2 - 13;11	La Trobe Communication Questionnaire	Attention deficit hyperactivity disorder, Dyslexia, difficulties with language and literacy skills, speech difficulties (100% total)	Med.
Auditory processing disorders in incarcerated youth: A call for early detection and treatment	Berken JA, et al. ¹⁶	2019	United States of America	52	M/F	16	Randomized Dichotic Digits Test (RDDT) / Dichotic Words Test (DWT)	Auditory processing disorders (77%)	High
You have the right to remain silent: The ability of adolescents with developmental language disorder to understand their legal rights	Lieser AM, et al. ¹⁷	2019	United States of America	40	M/F	15;8 - 15;9	The Clinical Evaluation of Language Fundamentals® - Fourth Edition	Language Development Disorder (50%)	High
Language diversity, language disorder, and fetal alcohol spectrum disorder among youth sentenced to detention in Western Australia	Kippin NR, et al. ¹⁸	2018	United Kingdom	98	M/F	16;2	The Clinical Evaluation of Language Fundamentals® - Fourth Edition	Language disorders (50%)	High
Mental health morbidity among people subject to immigration detention in the UK: A feasibility study	Sen P, et al. ¹⁹	2017	United Kingdom	101	M	31;65	MINI v6.0/ SAPAS/ AQ-10/ASRS/ LDSQ/CANFOR	Autistic Spectrum Disorder (14.9%) e Attention Deficit Hyperactivity Disorder (13.9%)	High
Examining the association between language, expository discourse and offending behavior: An investigation of direction, strength and independence	Hopkins T, et al. ²⁰	2017	United Kingdom	52	M/F	16	The Clinical Evaluation of Language Fundamentals® - Fourth Edition	Language disorders (81%)	High
Neurodevelopmental disorders in young violent offenders: Overlap and background characteristics. Psychiatry	Billstedt E, et al. ²¹	2017	Sweden	270	M	22;3	Diagnostic and Statistical Manual of Mental Disorders 4th edition	Autistic Spectrum Disorder (10%) e Attention Deficit Hyperactivity Disorder (43%)	High

(continued)

Table 3. Characteristics of the studies (*continuation*).

Title	Authors	Year	Country of origin	SS‡	Sex	Age	Assessment scale	Disorder	Q.E.*
Language impairment and comorbid vulnerabilities among young people in custody	Hughes N, et al. ²²	2017	United Kingdom	93	M	16;9	Test of Word Knowledge (TOWK; Wiig & Secord, 1989)	Language and communication difficulties (47%)	High
Neurodevelopmental disorders in prison inmates: Comorbidity and combined associations with psychiatric symptoms and behavioral disturbance	Young S, et al. ²³	2017	United Kingdom	390	M	30;3	The Autism Quotient (AQ) (Baron-Cohen et al., 2001) / Diagnostic Interview for ADHD in Adults – 2.0 (DIVA 2.0) (Kooij, 2010)	Attention Deficit Hyperactivity Disorder (24.5%) e Autistic Spectrum Disorder (9%)	High
Intervening to address communication difficulties in incarcerated youth: A phase 1 clinical trial	Snow PC y Woodward MN. ²⁴	2016	Australia	6	M	17,7	The Clinical Evaluation of Language Fundamentals® - Fourth Edition	Severe language difficulties (100%)	High
Hearing, auditory processing, and language skills of male youth offenders and remandees in youth justice residences in New Zealand	Lount SA et al. ²⁵	2016	New Zealand	33	M	16;04	The Clinical Evaluation of Language Fundamentals® - Fourth Edition	Language disorder (64%)	High
Characteristics of prisoners with neurodevelopmental disorders and difficulties	McCarthy J, et al. ²⁶	2016	United Kingdom	240	M	31,3	Learning Disability Screening Questionnaire (McKenzie & Paxton 2006; McKenzie et al. 2012) / ADHD self-report scale (Adler et al. 2003) / Autism Quotient (Brugha et al. 2009; Brugha et al. 2011).	Attention Deficit Hyperactivity Disorder (65%) e Autistic Spectrum Disorder (46%)	Med.
Young offenders' perspectives on their literacy and communication skills	Hopkins T, et al. ²⁷	2015	United Kingdom	31	M/F	16	Semi-structured interviews	Low language ability (100%)	High
Language functioning, mental health and alexithymia in incarcerated young offenders	Snow PC, et al. ²⁸	2015	Australia	100	M/F	17,1	The Clinical Evaluation of Language Fundamentals® - Fourth Edition / Test of Language Competence–Expanded (TLC-E).	Language difficulty (37%)	Med.
Attention deficit hyperactivity disorder (ADHD): Prevalence and socio-demographic features in imprisoned population	Pérez CR, et al. ²⁹	2015	Spain	143	M/F	35 - 41	Adult ADHD Self-Report Scale (ASRS) / Wender Utah Rating Scale (WURS)	Attention Deficit Hyperactivity Disorder (25%)	High

(*continued*)

Table 3. Characteristics of the studies (*continuación*).

Title	Authors	Year	Country of origin	SS‡	Sex	Age	Assessment scale	Disorder	Q.E.*
Miranda rights comprehension in young adults with specific language impairment	Rost GC y McGregor KK. ³⁰	2012	United States of America	34	M/F	18-25 años de edad‡	Test of Adolescent and Adult Language— Fourth Edition (TOAL-4; Hammill, Brown, Larsen, & Wiederholt, 2007)	Language Specific Commitment (50%)	High
Oral and written language in institutionalized juvenile offenders	Destro CMA, et al. ³¹	2012	Brazil	40	M/F	15-18 años de edad‡	Toulouse Exame - Standart Inicial	Data did not indicate language disorders (oral and/or written)	Low
Oral language competence in incarcerated young offenders: Links with offending severity	Snow PC y Powell MB. ³²	2011	Australia	100	M	19;03	Three sub-tests of the Test of Language Competence— Expanded edition (Wiig & Secord, 1989) / The Clinical Evaluation of Language Fundamentals® - Fourth Edition	Language difficulties (46%)	High
Speech and language therapy intervention with a group of persistent and prolific young offenders in a non-custodial setting with previously undiagnosed speech, language and communication difficulties	Gregory J y Bryan K. ⁴	2010	United Kingdom	72	M/F	15;35	The Clinical Evaluation of Language Fundamentals® - Fourth Edition	Language difficulties (65%)	High
Language and communication difficulties in juvenile offenders	Bryan K, et al. ³³	2007	United Kingdom	58	M/F	17	Test for Reception of Grammar: Version 2 (TROG-2) (Bishop 2003) / British Picture Vocabulary Scale (BPVS-II) (Dunn et al. 1997 / Test of Adolescent and Adult Language, 3rd Edn (TOAL-3) (Hammill et al. 1994) (verbal subtests)	Language difficulties (66% to 90%)	High
Prevalence of attention deficit-/hyperactivity disorder (ADHD) and comorbid disorders in young male prison inmates	Rösler M, et al. ³⁴	2004	Germany	129	M	19;2	Wender Utah Rating Scale (WURS)/ Eysenck Impulsivity Questionnaire (EIQ) / Alcohol Use Disorder Test (AUDIT) / International Personality / Disorder Examination (IPDE) / Structured Clinical Interview for DSM-IV (SCID).	Attention Deficit Hyperactivity Disorder (45%)	Med.

(continued)

Table 3. Characteristics of the studies (*continuation*).

Title	Authors	Year	Country of origin	SS‡	Sex	Age	Assessment scale	Disorder	Q.E.*
Preliminary study of the prevalence of speech and language difficulties in young offenders	Karen B ⁸	2003	United Kingdom	30	M	19;5	Test of Adolescent Language and the Test of Adolescent and Adult Language (TOALE) (Hammill et al. 1994)	Speech, language and communication difficulties (47%)	High
Female incarcerated adolescents with language problems talk about their own communication behaviors and learning	Sanger D, et al. ³⁸	2003	United States of America	13	F	15;43	Clinical Evaluation of Language Fundamentals-3 (CELF-3) (Semel, Wiig, & Secord, 1995) / Adolescent WORD Test (WORD Test) (Zachman, Huisinigh, Barrett, Orman, & Blagden, 1989)	Language difficulty (100%)	Med.
Communicative disorders in a group of adult female offenders	Wagner CO, et al. ³⁶	1983	United States of America	50	M	27;64	Subtest V of the Token Test (De Renzi and Vignolo, 1962)	Difficulties with articulation, hearing, receptive language, fluency (stuttering) and voice disorders (44% total)	Med.
Total				2188					

Nota. *Q.E.: Quality evaluation (STROBE). † STROBE: Assessment of the quality of selected studies, based on the essential items of the Strengthening the Reporting of Observational Studies in Epidemiology Declaration. ‡SS: Sample size; §Med: Medium. ||Not described by the authors. ¶Authors did not state average age / Age in Years.

the prison had ADHD and ASD, without adequate treatment²¹.

Language and communication disorders and the correctional system

There are no English-language studies evaluating language and communication disorders in incarcerated individuals from African countries, Latin America or Asia. In a pivotal study published in Brazil, communication disorders were not specifically described. However, there was a high rate of school dropouts and difficulty adapting to school rules and routines, indicating language impairment, especially in written language³¹.

Assessment scales

In all studies, scales were used to assess language and communication disorders, the main one being The Clinical Evaluation of Language Fundamentals®, which can be used to evaluate all aspects of a child's communication, including receptive language, expressive language, phonological awareness, and pragmatic skills. It is used by speech language pathologists to

identify the strengths and weaknesses of communication skills in children older than 5 years.

DISCUSSION

The results of this systematic review suggest that prison inmates have a high frequency of language and communication disorders, and thus end up being more vulnerable within the correctional system. Communication problems were found in different proportions among the groups; however, they affected all prison populations evaluated in this study.

It is noticeable that even with the presence of speech and language pathology professionals in the correctional system, communication problems still occur, translating into the need for other strategies to improve reception and implementation. Wagner and Potter in 1983 already reported concerns regarding the presence of speech, language, and hearing problems in the prison population³⁶. In 2021 it was demonstrated that communication disorders are still frequent in the correctional system and that there have been no changes in approximately 40 years¹⁴. It is worth noting that

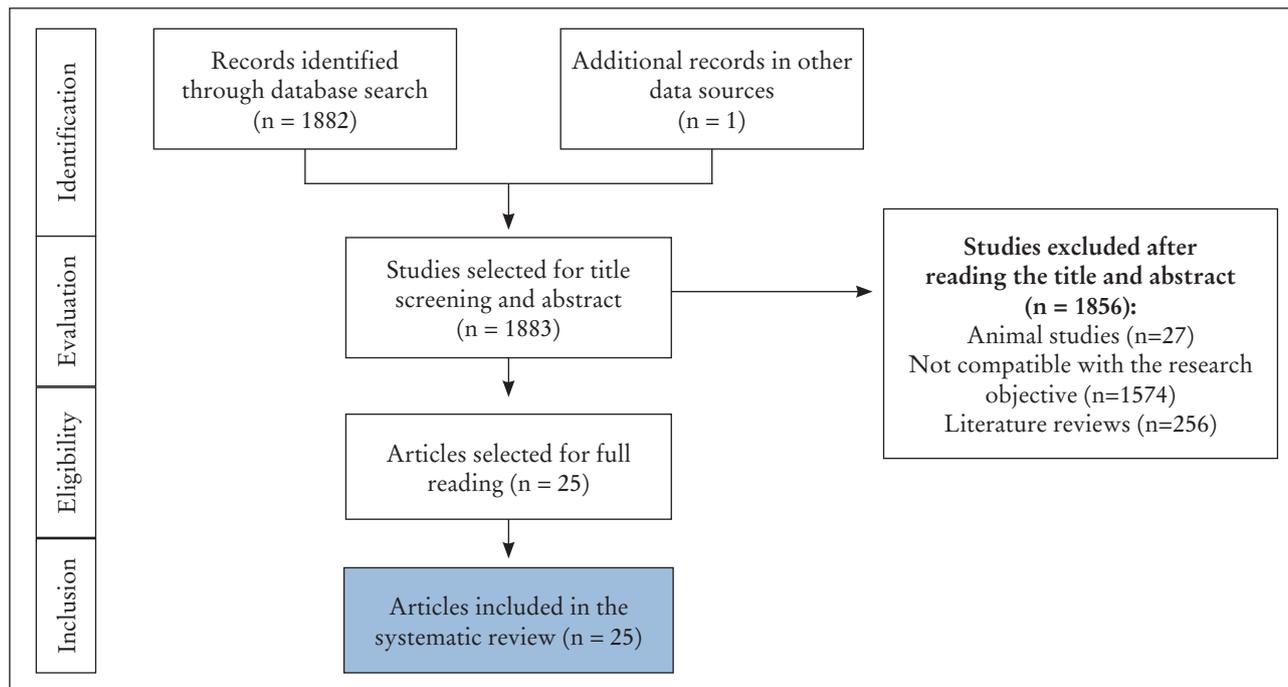


Figure 1. Flowchart of identification, screening, eligibility, and inclusion of studies in the systematic review as per the PRISMA Statement.

almost all inmates had contact with the justice system previously and did not have assistance in the treatment of their communication disorders.

Good communication between the individual in custody and the State is essential to assure that the rights of the citizen are clearly understood and that his alleged offense will be adequately explained. If a person cannot articulate the facts or is not understood due to communication problems, they can never effectively receive due process in a legal system. A current example shows that in the United States, young people with language disorders are particularly vulnerable to not understanding their Miranda rights and the consequences of waiving them¹⁷. This lack of understanding motivated by ignorance of rights, a hostile environment or inadequate understanding of the language is translated into greater or unfair penalties.

Thus, considering that in most societies, even the most civilized ones, individuals who have restrictions on their freedom belong to social classes with less access to education and culture, leading to less access to the benefits that the State offers. It is observed that the dialogue between the person in custody and the authorities becomes difficult from the onset of any interaction. Thus, there is a need for law enforcement, courts, and the department of corrections to be vigilant, and track neurodevelopmental disorders in young offenders²¹. On the other hand, in addition to

fear, there is a culture of insecurity, hostility, and rejection in underrepresented populations. These typically have the lowest socioeconomic status and often consist of immigrants, people with mental problems or African Americans. Once an individual is detained, their first opportunity to explain their actions it is at the police station. At this point, it is worth noting that many suspects have a low educational level, fear of authority, and cannot afford to hire a lawyer. In many countries, the long wait for sentencing often stems from the fear of the authorities towards individuals presumed to be guilty (criminals). This label means that during most of the period in which they are under custody of the State, they do not have access to the full and legitimate legal system. In the articles evaluated in this review, emphasis was placed on the need to closely examine the oral language skills of adolescents who, when they do not possess adequate literacy skills, have difficulties in dealing with the prison system. Once a young person is involved with the legal system, attention must be given to his oral language skills, to allow proper defense and access to their rights as defined by law³².

Thus, our article demonstrates the need for strategies that allow better communication between the State and the inmate population, so that people can have access to their legal rights. To this end, multidisciplinary groups involving psychologists, speech-lan-

guage pathologists, and social workers should work in harmony with members of the State legal system so that the justice system becomes a tool in favor of the citizen and not a weapon of punishment.

CONCLUSIONS

The prison population grows and grows, and that already demonstrates that something needs to change to reduce infractions and recidivism. Many young people and adults who are in contact with the justice system have communication disorders and these difficulties are often not previously recognized. Furthermore, people in prison experience much worse mental and physical health compared to the general population. The articles in this review demonstrate that incarcerated individuals have a high frequency of communication disorders, the main one being language disorders. Speech therapists are important members of the justice workforce and improve the health, well-being, and participation of people in contact with the justice system through prevention, early detection, assessment and treatment of speech, language, communication and even swallowing.

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